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ABSTRACT

Eight secondary schools participated in this study of the relationships among school policies, principal leadership style, teacher behavior, and student behavior. Data were gathered through student and teacher observations, student and teacher questionnaires, student absence records, observations of the physical environment, and interviews with principals. As one facet of the study, all teachers participated in the Stallings Effective Use of Time Training Program. A number of major findings emerged: (1) in schools where policies and rules were clearer and more consistently enforced, teacher morale was higher and there were fewer classroom intrusions, less litter and vandalism, a lower absence rate, less class misbehavior, and more time spent on task; (2) in schools with more administrative support services and fewer burdensome duties, teacher morale was higher and there was less classroom misbehavior; (3) in schools where the principal was more collaborative and respectful, teachers had higher morale and students perceived teachers and students as more friendly; (4) in schools with more supportive principals, more teachers implemented the training program; (5) in schools where the policies and rules were clear and consistent, more teachers changed their classroom behavior as recommended by the program; and (6) in schools where the teachers implemented the training program, students spent more time on task. (Author/JM)

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SCHOOL POLICY, LEADERSHIP STYLE, TEACHER CHANGE AND STUDENT BEHAVIOR IN EIGHT SCHOOLS

Final Report

September, 1981

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MAJOR FINDINGS
FROM A STUDY OF EIGHT SECONDARY SCHOOLS

- IN SCHOOLS WHERE POLICIES AND RULES WERE CLEARER AND MORE CONSISTENTLY ENFORCED, THERE WAS HIGHER TEACHER MORALE, FEWER CLASSROOM INTRUSIONS, LESS LITTER AND VANDALISM, A LOWER ABSENCE RATE, LESS CLASS MISBEHAVIOR, AND MORE TIME-ON-TASK.

- IN SCHOOLS WHERE THERE WERE MORE ADMINISTRATIVE SUPPORT SERVICES AND FEWER BURDENSOME DUTIES, THERE WAS HIGHER TEACHER MORALE AND LESS CLASSROOM MISBEHAVIOR.

- IN SCHOOLS WHERE THE PRINCIPAL WAS MORE COLLABORATIVE AND RESPECTFUL, TEACHERS HAD HIGHER MORALE AND STUDENTS FELT MORE FRIENDLINESS.

- IN SCHOOLS WITH MORE SUPPORTIVE PRINCIPALS, MORE TEACHERS IMPLEMENTED THE TRAINING PROGRAM.

- IN SCHOOLS WHERE THE POLICIES AND RULES WERE CLEAR AND CONSISTENT, MORE TEACHERS CHANGED THEIR CLASSROOM BEHAVIOR AS RECOMMENDED.

- IN SCHOOLS WHERE THE TEACHERS IMPLEMENTED THE EFFECTIVE USE OF TIME TRAINING PROGRAM, STUDENTS SPENT MORE TIME-ON-TASK.

- FINDINGS REGARDING EFFECTIVE SCHOOL POLICY AND PRINCIPAL LEADERSHIP STYLE WERE SIMILAR FOR SCHOOLS SERVING HIGH INCOME AND LOW INCOME STUDENTS.

Chapter I

INTRODUCTION

This study of principals, teachers and students in eight high schools grows naturally out of the classroom research in the 1970's. During that time, instructional strategies were identified that were effective in helping students gain basic skills in reading and mathematics. These research findings were badly needed to help guide the practice of teachers. Teachers in high schools were especially in need of assistance to teach the many students who had entered high school needing remediation. Several researchers made efforts to train teachers to use effective strategies (Gage, 1978; Evertson, 1979; Good and Grouws, 1981; Stallings, Needels, Stayrook, 1979). These efforts resulted in improved teaching practices and student achievement gains.

The Stallings study alone among the studies mentioned above included high school teachers. It was during the teacher training phase of the study that teachers gave evidence that several school and principal factors either facilitated or limited teachers' abilities to implement components of the Stallings Effective Use of Time training program. Most of these factors were policy related, e.g., What were the policies for tardiness, cuts or misbehavior? Were the policies clear and consistently enforced? How were the policies communicated? What was the policy for interrupting the classroom time? Were students taken from class for extracurricular activities? Were students taken from class for meetings with counselors or special programs? How often was the loudspeaker used?

Principals' leadership styles were also identified as factors that assisted or deterred teachers' efforts to change their classroom behavior. Some principals were well informed and showed an interest in the program. They asked teachers to give reports on the training in staff meetings. Other principals paid no attention to the training program. Some principals were reported to be very directive while others were reported to be collaborative in making policies.

The purpose of this study was to learn more about the relationships existing between school policies, principal leadership style, teacher behavior and student behavior.

It has been of critical importance to learn how principals function in high schools today. Most principals received their administrative training in the 1940's, 1950's and 1960's. Their training did not prepare them to deal with the crises facing schools today. Principals are torn between shrinking school budgets, increased demands for excellency in education from parents and school boards, contract negotiations demanding higher wages, and maturing staff that needs retraining if they are to successfully teach the students in our schools today. All high schools have students who failed their competency exams; these students need appropriate instruction that will enable them to gain the required skills. Very few of the tenured secondary teachers are qualified to teach students who need remediation. Due to integration efforts, high schools have students from many different ethnic backgrounds with different modi operendi. Children of the immigrants need help and support to learn the language and the ways of this new land. What do principals do in these situations? Much courage, stamina, and creativity are required to be an effective high school principal in today's schools.

This study is dedicated to identifying effective school policies and principal leadership styles--in such detail that the information can be used to help administrators improve the administration of schools.

Figure 1 shows the major factors coexisting in a school, the school policies, the teachers, and the students. These factors do not exist in a vacuum -- the district and higher administrators, the community, and other political forces also influence school effectiveness. Yet, it seems that within the larger educational system, some schools are more successful than others in providing a climate conducive to learning.

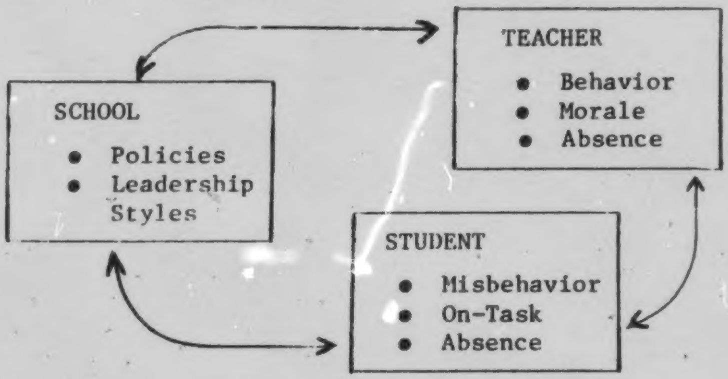


Figure 1
Coexisting School Factors

Thus, school policies, principal leadership styles, teacher attitudes and behavior, and student attitudes and behavior all relate to one another. In order to form an understanding of schools, all three factors and their interrelationships need to be investigated in depth.

Review of Related Literature

Several studies of educational effectiveness have concentrated on relationships between teachers' instructional behavior and student outcomes. Another large body of research has investigated the relationship between school factors and teacher implementation of innovative programs. Finally, studies of effective schools have been conducted where links between school factors and pupil achievement were sought.

Few studies have attempted to investigate the interrelationships between school factors, teacher attitudes and behavior, and pupil outcomes. Those that exist have typically been conducted at the elementary level (e.g., Brookover and Lezotte, 1979), or have combined school, teacher and pupil factors into school process factors (e.g., Rutter's (1979) "Ethos" variable).

Because the small "neighborhood" atmosphere in the elementary schools is so dramatically different from the large, complex climate of the high school, it seems unwise to generalize those school effectiveness findings to secondary schools. Rutter's pioneering research in English high schools has suggested several important relationships between schools and teachers that affect student outcomes.

The literature related to each of the links shown in Figure 1 will be reviewed in the following order: (1) teacher to student, (2) school to student, and (3) school to teacher.

Teacher Behavior and Student Outcomes

Upon noting the radical drop in achievement test scores, researchers began investigating factors that may influence educational effectiveness. The first evaluations of school programs used the school as the level of analysis and considered only achievement test scores as outcomes. However, it became apparent that, within schools, some teachers helped children to learn year after year, even in the most difficult urban school situations.

Thus, research in the late 1960's and 1970's started to focus on the classroom as the unit of analysis. A body of process/product classroom research emerged: Brophy and Evertson (1974), Fisher, et al. (1978), Good (1978), F.J. McDonald (1976), R. Soar (1973), Stallings and Kaskowitz (1974), Stallings, Cory, Fairweather, and Needels (1977), Stallings, Needels, and Cory (1978). The findings related to effective use of class time and not to demographic characteristics. These studies produced findings about effective classroom instructional processes that were specific enough to guide inservice training. Indeed, Anderson, Evertson and Brophy (1979), Good and Grouws (1979), Crawford, et al. (1978), and Stallings, Needels and Stayrook (1979) translated their findings into inservice training and conducted experiments with treatment and control teachers. These efforts successfully modified teacher behavior and produced effects on student learning gains.

The findings of Junior High and Senior High School studies indicate that effective basic skills teachers maximize student time-on-task, spend the majority of class time interacting with students during several different academic activities, and have high expectations of their students (Stallings, et al., 1979).

The Stallings training has now reached over 200 secondary school teachers of basic reading and writing. In the process of working with these teachers, it became apparent through discussions and questionnaires that certain school policies and practices affected the ability of teachers to teach effectively. Weak attendance and tardiness policies, frequent classroom intrusions, poor access to student information, and lack of permanent classrooms were all mentioned by teachers as hindering their ability to do a good job. These teachers' comments formed the basis for the hypotheses investigated in this research study.

However, before discussing the design and results of that study, let us see what has been learned about the school-to-pupil link in Figure 1.

School Factors and Student Outcomes

Few studies have attempted to investigate the effectiveness of secondary schools in terms of school policies and pupil outcomes. Rutter's (1979) seminal study of twelve London secondary schools showed that between-school differences in student academic success, attendance and behavior were not just a reflection of what the students were like when they entered Social Economic Status (e.g., S.E.S. or ability level) and that much of the effects of secondary schools were linked with their features as organizations ("school processes") The "school processes" investigated were: (1) academic emphasis, (2) staff organization, (3) pupil reward and punishment, (4) pupil conditions, (5) children's responsibilities and participation in the schools, (6) stability of teaching and friendship groups, and (7) teacher actions. Together, these processes combined to create a school "ethos" or a set of attitudes and behaviors that characterize the school.

The findings from Rutter's (1979) study and from research conducted by Stallings and colleagues have suggested several links between school policies and student outcomes.

Physical Environment. Rutter (1979) found that schools receiving high ratings on "pleasant and comfortable" environments had pupils with higher exam success. He also found that physical cleanliness and attractiveness of the school correlated significantly with pupil behavior. The amount of litter and graffiti that is tolerated is a school policy. In these times of dwindling funds, administrators and staffs must be creative in how they persuade students to cooperate in creating this pleasant environment.

Attendance Policy. It is no surprise that Rutter (1979) found that pupils attending 75% or more of school time had higher exam scores. But, the important point here is that poor attendance is becoming a bigger and bigger problem in today's high schools. Clearly, teachers cannot reach students who do not appear in class.

Stallings, et al. (1979) found that interactive, supportive instruction was related to lower student absence. But, absence rates need to be brought under control at the school level as well as at the classroom level. Rutter (1979) reported on a high school study by David Reynolds (1976) where enforcement of formal rules and internal school organization were significantly correlated with good attendance.

> It seems that a school needs a policy of keeping parents well-informed of their students' absences. Some schools where absenteeism is high have formed a parent, counselor, student, teacher, and school board committee to discuss the problem and suggest solutions. In schools where the problem is taken seriously, with rules and penalties known and enforced, teachers report fewer cuts in their classes (Stallings, et al., 1979).

Tardiness Policy. Tardiness is a severe problem to the secondary teacher. In the Stallings and Needels (1979) workshops, teachers were encouraged to have their assignments on the chalkboard and to get the show on the road the moment the bell rings. If there are only 45 minutes to teach basic reading skills, then each minute is golden and none can be wasted. The teachers reported having a high rate of tardy students in many schools, and they considered it a problem because the flow of instruction was stopped the minute someone enters the room after the bell.

Some schools had clear rules about tardiness and contracts were made with some parents and students regarding making up time. Teachers reported that tardiness was reduced when this was handled at the school level and firmly applied to all students. One school adopted a school-wide policy as a result of the workshops. Initially, the central office had a busy time contacting parents and keeping records of tardy students, but tardiness was reduced by 60% after the first two months of school and the teachers' morale regarding this problem seemed high.

Rutter (1979) reported that where general school policies for classroom discipline existed, academic and delinquency outcomes were significantly better than they were in schools lacking general policies. This finding may apply to tardiness and absence in addition to other types of pupil misbehavior.

Intrusions. Research by Stallings, Needels and Stayrook (1979) indicates that classrooms having more intrusions from the outside; e.g., announcements on the intercom, requests for students to leave the room, tardy students coming into the room; had students who made less gain in basic reading skills. Other school personnel (counselors, school paper editors, drama coaches, physical education coaches, music directors, detention officers) may not appreciate how difficult it is to get a classroom of low ability students on-task and productive, and how easy it is for them to get off-task. When interruptions are allowed during class time, it may imply to the student that what is occurring in the classroom lacks value.

School administrators can establish clear guidelines about the sacrosanct nature of classroom teaching, i.e., if we are serious about teaching basic reading skills, no one disturbs a teacher when class is in session. Nothing less than a cataclysmic event should stop the teacher in progress. Some administrators allow 10 minutes for announcements at the beginning of the day rather than make announcements at random. One classroom in a previous study had 20 intrusions during a 45-minute period. Clearly it is difficult to accomplish academic tasks in such an environment.

It makes sense that such school policies are related to optimal use of class time and do impact upon student learning. Yet there is little research that explains these linkages. Rutter's (1979) study of 12 inner-city London schools and Stallings' (1979) work with secondary teachers provides some tentative guidance for those seeking to improve school policy. Both studies provided several hypotheses that merit testing. There is clearly a need for further investigation of the link between school policies, teacher behavior and pupil outcomes at the secondary level.

School Factors and Teacher Behavior

Many of the findings in this section are from studies of implementation of educational innovations where factors that seemed to inhibit or facilitate teacher adoption of new teaching programs or practices were investigated. At the date of the most recent review of this literature (Fullan and Pomfret, 1977), there were no implementation studies at the high school level. Given the need for improvement of instruction in many of today's high schools, studies in this area are clearly needed.

School policies and the principal's role are critical to the success of school improvement efforts. After synthesizing research on improving schools, Ann Lieberman and Lynn Miller (1981) concluded:

> School improvement occurs on two levels -- the teacher level and the school organization level -- at the same time. Teacher change is motivated when teachers believe that their efforts really count, and it is facilitated when teachers receive quality training and positive support. Change at the whole-school level... produces the best results when the school's concerns are related to teacher concerns, and it is facilitated the most by the school's principal. (p. 586)

School Climate: Collegiality and Communication. In an impressive recent study of factors related to effective staff development in an urban desegregated school district, Little (1981) found that teacher improvement efforts were more likely to succeed in schools where there was a "norm of collegiality" -- sharing and learning from others. Rutter (1979) found that in more successful schools, teachers planned and worked in groups, whereas in less successful schools, they tended to work on their own with little coordination. And, in Fullan and Pomfret's (1977) review of curriculum and instruction implementation, intra-staff cooperation, support and exchange of ideas were cited as an important factor in change efforts.

Berman and Pauly (1975) highlighted the importance of communications in their summary of the Rand Corporation's study of educational change. Regular and frequent staff meetings and feedback were an important determinant of implementation for all levels of schools and for all federal programs studied. Teachers in the less successful schools studied by Rutter (1979) reported feeling that their views were not taken into consideration during school decision-making sessions.

Several studies have reported that teachers needed to be included in the planning process for school programs to succeed (e.g., Naumann-Etienne, 1974; Caldwell, 1980). In the Stallings, et al. (1979) research, many teachers reported that they had little contact with their principals. Staff meetings were most often departmental. School-wide problems were rarely addressed as a staff. Instead, edicts were handed down. In those schools where teachers had access to the principal and could suggest agenda items for staff meetings, morale appeared to be higher.

Principal Leadership Style. The school principal has frequently been cited as the prime mover in initiating and maintaining school effectiveness (e.g., Lieberman and Miller, 1981; California State Department of Education, 1977; Crowther, 1972; Berman and McLaughlin, 1976). The principal exercises profound influence upon the school climate and instruction through his or her leadership. Of course, the principal's support of any instructional innovation is critical to its success.

Some researchers suggest that more directive, firm principals may be most effective, especially in low-acheiving schools. Cohen and colleagues (1977) argued that the teachers they studied might welcome a more directive administrator. Edmonds (1979) and Venexky and Winfield (1979) supported stronger administrator control in low-S.E.S. schools. As Stallings, et al. (1979) worked with high school teachers, many of them mentioned that indecisive principal leadership or little administrative support made their jobs well-nigh impossible. In fact, one group of teachers formed a coalition and enforced a tardy policy where they traded time supervising detentions. In time they enlisted their colleagues support in getting a more stringent school policy. Finally, Brookover and Lezotte's (1979) study of "improving" and "declining" elementary schools indicated that principals of improving schools were assertive instructional leaders and strong disciplinarians who emphasized achievement and evaluation.

A major function of principals is the maintenance of academic standards. In Judith Warren Little's (1981) study of staff development in urban elementary and secondary schools, the schools most likely to improve had not only a "norm of collegiality", but a "norm of continuous improvement". In those schools, there were expectations for instructional analysis, evaluation, and experimentation. In Wellisch, MacQueen, Carriere and Duck's (1978) study of successful schools (ones that succeeded in raising student achievement beyond expected levels), principals of such schools emphasized academic standards through: (1) review and discussion with teachers about classroom performance, (2) opposing the postponement of teaching basic skills, and (3) requiring students to repeat grades when their performance was unsatisfactory. The successful administrators in these schools provided task-related guidance and direction while at the same time allowing for adequate and meaningful input from teachers.

The principal needs to provide not only strong instructional leadership, but adequate support for the teachers he manages. Crowther (1972) and Naumann-Etienne (1974) cited the principal's support of staff as a key factor in school-based change. Evans and Scheffler (1974) found a correlation of .51 between administrative support and degree of implementation. The Rand researchers (Berman and McLaughlin, 1976) found that high morale of teachers, active support of principals and general support of higher administrators all related to teacher change. Thus, this facet of the principal's role is also critical.

In sum, the upshot of most research on teacher and school change is that "project outomes depended more on the characteristics of the project's setting than on any other factor." (Berman and McLaughlin, 1976, p. 361)

Still, there is one problem with what can be learned from the "change" literature. The implementation studies have usually focussed upon whole-school change, where a new educational program is being adopted by all teachers in a school. Thus, these findings may not necessarily apply to the question: What are effective school policies in naturalistic settings, where no large-scale change program is in effect? Secondary school studies addressing the latter question are few (e.g., Rutter, 1979).

As has been noted, the research on schools, teachers and students has usually been conducted at the elementary school level and has rarely considered all three facets of schools in the same study. Rutter's study was unique in that it was conducted at the secondary level and considered school, teacher, and pupil factors. But Rutter also combined school, teacher and pupil-level variables into one large "school ethos" variable. Although the general school ethos related strongly to pupil outcomes, it does little to enable us to understand specifically how school, teacher and pupil variables interrelate independently to form effective schools. Still, the great contribution of this study was in providing hypotheses that could be explored in greater detail.

The information yielded by research on school effectiveness thus far does little to guide practice. What should school administrators do to be more effective so that teachers will be more effective and students will benefit more from their schooling? In order to provide answers to such a question, relationships between school factors must be identified and studied in depth. Only then can the causal relationships be hypothesized and tested in a systematic manner.

The research presented in this report attempted to clarify the relationships between the following variables: (1) school policies, (2) principal leadership styles, (3) teacher morale, (4) teacher improvement, (5) student morale, and (6) student behavior. The policy and leadership variables were examined in relation to each of the teacher and student variables and in relation to one another to understand how effective secondary schools operate.

Chapter II

RESEARCH DESIGN

The study was conducted in two phases. Phase I was guided by a set of questions and hunches based upon prior research and teacher reports. Relationships found in Phase I between school-level variables, classroom instructional processes, and other teacher and pupil outcomes will be used to provide instruction for principals in Phase II. This information is expected to help them understand and implement some of the structure and organization variables found to be positively related to desired teacher and pupil outcomes.

Hypotheses

As our classroom research has demonstrated, students thrive in structured, well-organized classrooms where the rules and goals are clear and consistently carried out (Stallings, 1980). We believe that teachers also appreciate a clear structure, but one that is supportive and encourages collaboration.

In schools with this type of organization and structure, we believe that teachers and students will demonstrate lower absence rates, and that teacher, student and administrator morale will be higher. These beliefs guided the following study hypotheses:

- Students and teachers will have lower absence rates in schools where the policies and rules are clear and consistently administered.
- Teacher and student morale will be higher in schools where the principal leadership style is supportive.
- Teacher morale will be higher where staff meetings are frequent and are rated as productive and interactive.
- Teachers will change their teaching behavior more and will implement the inservice training program better in schools where the teachers perceive the principal to be supportive and where the policies are clear and consistently enforced. In these environments, fewer interruptions will occur in the classrooms and students will be off-task less often.
- Schools that have clear and consistently enforced policies will have less litter, fewer broken windows, and fewer students in the halls or on school grounds during class time.

Sample

To examine these hypotheses, our study was carried out in eight secondary schools. Since this research was focused on school structure and organization, the sample of schools needed to include a wide variety of policies and organization plans. The intention was to include some schools that were structured and clear in their policies and expectations and some that were not. Schools with variable grading systems were also sought. Finally, the design called for schools with varying ethnic populations and economic backgrounds. Within each school we wanted to include six teachers who taught reading in the content area. We expected most of these to be science, social studies, and English teachers.

Recruitment of Schools and Teachers

A list of candidate schools was prepared on the basis of reputation to be very structured organizationally and very flexible organizationally. Opinions of school structure or flexibility were gathered from experts in the field that work in the Bay Area schools. These were school superintendents, county coordinators of secondary schools, and Stanford University consultants who have studied a large number of Bay Area schools. These opinions were solicited in regard to rule clarity, rule enforcement, communication patterns, leadership style, grading systems, delinquency and the general feeling that a school was well-run or not so well-run.

The principals in 29 schools were sent letters describing the study and a note that a follow-up call would be mad to inquire of their interest. The letter that was sent is included in Appendix A.

The recruitment process was hierarchical and slow. First we met with the superintendent of a school system and with the curriculum coordinators. They then arranged meetings with school principals. If the principals were interested, they arranged for meetings with their teachers in early September. Most principals could not make a commitment until they had talked with department heads, curriculum coordinators and teachers. Thus, in midsummmer we had eight interested principals who were willing to commit staff development funds for release time if their teaching staff agreed.

Initial Fall Sample

The initial school sample was nicely balanced in terms of ethnicity and family incomes. Two of the schools had a primarily white population with students from average or above-average income homes. The other six schools had large minority populations in which Black, Mexican American and Vietnamese students were represented. The family income in these schools ranged from average to below-average.

The eight principals' backgrounds ranged from one who was an FBI agent to another who was an Erhard Seminar Training (est) trainer. The reputations of the schools ranged from very positive -- with few student problems and high student test scores -- to considerably less positive reputations.

The schools recruited for the sample used several different grading systems. However, none of them used a variable credit system throughout the school. One school used variable credit for a computerized math program. Another school used variable credit for an honors independent study program. From our calls to schools which were reported to be using a variable credit system, we found that most had found the bookkeeping too cumbersome and had abandoned the system. Consequently, we abandoned this as a criterion for sample selection.

Final Fall Sample

During early September, arrangements were made to meet with each principal and the teachers who might be interested in the project. Letters were sent to each principal requesting that he or she inform the staff of the opportunity to hear a description of the research project. In most cases, 10-12 teachers attended the meetings. Three schools' principals decided they could not participate: one for financial and re-organizational reasons (effect of Proposition 13); one because of a prior commitment to another staff-development program; and the third because a staff meeting could not be arranged within the time limits of the study. Three other school districts were contacted, and the recruiting procedures explained above were repeated with them. By mid-September, three new schools had agreed to participate. These schools reasonably replaced those that had dropped from the study. All three schools had students in need of remediation and had Title I programs.

In conversation with the school principals it became evident that they were concerned about effective instruction in social studies, science, reading, English, and mathematics. We were urged to include any teachers who were teaching students that needed remediation. To adjust to this request, we changed our sampling plan and included those recommended by principals and those who volunteered.

The following table shows the list of the subjects taught by the teachers participating in the study.

Table 1
Number of Teachers Recruited
Per School and Per Subject

Subject	School designations								Total teachers per subject
	A	B	C	D	E	F	G	H	
Mathematics	2		1		1		3		7
Science	2			2	1	1			6
English	2	2				4		1	9
Special Educ.	1		2			1			4
Social Studies		2		1	1			1	5
Reading			1		2		3	4	10
Spanish				1					1
2nd Lang. Eng.								1	1
Total teachers per school	7	4	4	4	5	6	6	7	43

Attrition

The proposed study was to be conducted with a sample of 48 teachers, six from each of the eight schools. Because we were unable to recruit schools and teachers during spring, 1980, and had to wait until fall to introduce the study, it was difficult to get six teachers from each school to participate. Many had already made plans for other classes or workshops. Thus, late in September, 43 teachers had been recruited. All of these teachers were observed in the fall.

Attrition in secondary schools is always a difficult problem. Students are often shifted from one class to another, some classes are dropped and teachers are sometimes transferred to other schools. As in many research studies in natural settings, everything that could happen to a study did happen to our sample. A school-by-school description follows.

School A. Seven teachers were recruited in the fall. When the workshops began, one teacher could not participate due to overcommitment to other inservice activities. Six teachers completed the series of workshops and were observed in January. One of these unexpectedly went on sabbatical in the spring. Thus, five remained in the study.

School B. This school was recruited in late September when the other schools dropped out of the study. At that time, only four teachers could arrange time to participate. These four teachers attended the workshops and were observed in January and April and completed the study.

School C. This principal enlisted four teachers for the study. One of the teachers was unable to attend the workshops because of his after-school coaching schedule and subsequently dropped out of the study. Three teachers attended the workshops, were observed in January and April, and completed the study.

School D. In September this school was being reorganized so that two schools became one. This reorganization caused considerable insecurity among the staff. They felt little inclination to make any commitments regarding their time. Only four teachers in this school volunteered to participate. During the workshops, one teacher suffered from severe long-term health problems and had to drop out of the project. Consequently three teachers completed the workshops and were observed in January. Two of these teachers were transferred to other schools. To continue this school's participation in the study, four new teachers were recruited in March making a total of five teachers.

School E. This school was recruited in late September after the three schools dropped out of the study. Five teachers were observed in the fall and attended the workshops. Two teachers were not observed in January: one because her class had only two students remaining and the other because of school scheduling and personal problems. This school changed principals in December, and this change may have been unsettling to these teachers. However, all five teachers did participate in the spring workshops and observations.

School F. Six teachers agreed to participate and were observed in the fall. One teacher did not attend the workshops and dropped out of the study because of prior commitments. During the afternoon of the third workshop, the teachers received news that their school would be closed at the end of the school year. During the January observations, one other teacher was unable to continue her participation due to personal problems. Four teachers completed the study.

School G. Six teachers were observed and attended the workshops. Two teachers were unable to continue participation in the study because of pregnancy. Four teachers completed the study.

School H. Seven teachers volunteered to be observed in the fall. One of these teachers could not attend the workshops because of her overcommitments to other activities. Another teacher was ill with a terminal disease during the workshops. The third teacher knew she would have to drop out after the January observations because of pregnancy. A fourth teacher was transferred to another school. Only two of the initial group finished the study. In April, this school was selected for closing at the end of the school year.

By the end of the study, we had the following number of teachers in each school:

	School designation								
	A	B	C	D	E	F	G	H	Total
Number of teachers	5	4	3	5	5	4	4	2	32

Although our observation sample suffered, we were able to look at teacher behavior changes in those remaining. Our study also focused on school structure and organization, teacher morale and attitudes toward teaching. The information gathered from the original sample in the fall enabled us to investigate these school variables.

Description of Schools

The eight schools included in our sample were located in the San Francisco Bay area. They are distributed between inner-city San Francisco and South San Jose. Four of the eight schools had students from homes that are classified in the low to middle socioeconomic range. These four schools also had multiethnic populations (See Table 2). The homes of students in the remaining four schools were classified in the middle to high socioeconomic (SES) range. The two highest SES schools (C and E) had fewer single parent homes and fewer homes with both parents working. The turnover rate of the student populations ranged from 10% to 40%.

Table 2
Student and Parent Demographics

School Designation:	A	B	C	D	E	F	G	H
Ethnic Compostion								
Oriental percentage	23	4	5	13	11	13	7	20
Hispanic percentage	20	4	0	13	1	22	17	30
Black percentage	43	1	0	10	6	5	5	3
White percentage	10	91	93	63	81	60	71	44
Other percentage	7	0	2	1	1	0	0	1
Student Enrollment								
Turn over rate (%)	40	11	10	27	10	27	25	40
Parent Demographics								
Two parents working (%)	50	85	50	95	30	85	70	90
Single parents (%)	60	40	20	50	20	60	20	60
Occupation categories*	BC SP	SP	P	BC SP P	P	BC SP	SP P	BC SP

*Occupation categories:
BC - Blue Collar
SP - Semiprofessional
P - Professional

The schools ranged in size from 1,375 to 2,400 students. The number of teachers, counselors and administrators who provide services for these students differ by school (See Table 3). The schools with the largest student bodies (Schools G and A) did not have the largest staff. Each school distributed their staff somewhat differently. Schools C and H had released all of their counselors. Their school administrators arranged the students' schedules. School E, one of the highest SES schools, had the lowest pupil to teacher ratio. School E also had one of the lowest counselor to pupil ratios.

Table 3
Size of Student Body and Staff

School designation:	A	B	C	D	E	F	G	H
Student body size	2200	1800	2100	1680	1950	1500	2400	1375
Teaching staff	109	75	80	63	117	65	106	80
Counselors	4	4	0	3½	6	5	6	0
Administrators	4	4	4	5	4	3	4	5
Student/ Teacher ratio	20:1	24:1	26:1	27:1	16:1	23:1	23:1	17:1
Student/ Counselor ratio	540 :1	450 :1	N/A	450 :1	325 :1	300 :1	400 :1	N/A

Teacher Characteristics

Overall, the average age of the teachers in the sample was 41.5 years. The age of the staff differed considerably by school (See Table 4).

Table 4
Demographic Characteristics of Teachers

School:	A		B		C		D		E		F		G		H	
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
Age	44	6	44	8	44	12	38	11	47	7	44	4	31	7	45	11
Years in this school	5	5	5	4	10	5	6	8	3	1	14	8	5	1	11	2
Years teaching	18	4	18	10	17	9	12	10	22	7	19	3	6	3	14	4

The average teacher age at school G was 31 years while at school E the average age was 47. The average number of years of teaching experience was 16. These numbers reflect the maturity of the staff. Except in school G, most of the teachers received their teacher preparation prior to 1970.

Achievement Levels on the California Assessment Program, (CAP)

In California, seniors are given the CAP tests in reading, writing, spelling and mathematics. Schools are placed in percentile bands of expected performance according to the socioeconomic composition of the student body. Acceptable levels of performance are then established for each socioeconomic group. The achievement performance for the 1980 twelfth-grade students at each of the eight schools is presented in Table 5.

Table 5
CAP School Scores on 12th Grade Achievement Tests for Eight Schools in 1980

	Reading	Writing	Spelling	Mathematics
School A	4(B)*	5(B)	18(W)	4(B)
School B	61(W)*	72(W)	65(W)	66(W)
School C	97(A)*	97(A)	99(A)	99(A)
School D	36(W)	35(W)	48(W)	43(W)
School E	99(A)	99(A)	99(A)	99(A)
School F	60(A)	49(W)	72(A)	53(W)
School G	53(B)	68(W)	54(B)	63(W)
School H	31(B)	35(W)	70(A)	50(W)

*W = Within the accepted percentile band.
B = Below the accepted percentile band.
A = Above the accepted percentile band.

Schools C and E were performing in the 90th percentile and were above expectations. School C and E were two of the most economically advantaged in the sample. School E's ratio of students to teaching staff and counseling staff was the lowest of all schools. Their teaching staff had the most years of teaching experience and their student population had a low 10% turn over rate.

Most of the other schools were within their bands of expectation. School G was within the appropriate band in 1979 but their reading and spelling scores slipped below expectancy in 1980. Teachers at that school reported a school-wide vocabulary and spelling program that was in effect from 1975 to 1978. Students were taught five key vocabulary words in every subject every week. The positive effect upon the total school reading and spelling scores was dramatic. Then the coordinator of the program was transferred and the program did not continue. The drop in scores was just as dramatic from the 66th percentile in 1979 in reading to the 53rd percentile in 1980, and from the 73rd percentile in spelling in 1979 to the 54th percentile in 1980.

School A was performing lower than expectation in reading, writing and mathematics. However, these mean scores for the school mask the fact that many students were performing above those levels. Table 6 shows that 46% of the students were performing over the 50th percentile in spelling. This school has a new principal who has planned a reorganization to meet student needs. It will be interesting to see how these students perform on tests during the next few years.

Table 6
Quartile Performance of Students on the CAP in School A

	Reading	Writing	Spelling	Math
Below the 1st Quartile	44%*	45%	31%	48%
Between Quartiles 1 & 2	27%**	25%	23%	28%
Between Quartiles 2 & 3	17%	19%	23%	16%
Above Quartile 3	12%	11%	23%	8%

* 44% of the students were performing below the 1st quartile or below the 25th percentile.

** 27% of the students were performing between the 26th and the 50th percentile.

Principal Characteristics

The principals ranged from two to 20 years in experience as principals. Two were in their first year at the school (See Table 7). One of these was employed for this position in December. They ranged in age from mid-thirties to the early sixties. The average age was 50 years old. Most of these individuals had held other school positions prior to becoming principals, e.g., teachers, counselors, or vice-principals. Only one of the eight was a woman. All of the principals had masters degrees and administrative credentials.

Table 7
Principal Characteristics

	School designation							
	A	B	C	D	E	F	G	H
Years at this school	1	2	4	2	½	25	7	2
Years as a principal	4	2	4	10	5	6	20	2

Instruments

In order to investigate the relationships between (1) school structure and organization, (2) classroom teaching processes and (3) school, teacher and student outcomes, a pre-test/post-test design was used. Teachers and pupils completed questionnaires about their classes and schools in the fall and spring. Teachers were observed in October, trained in five inservice workshops in November and December, observed in January, and observed again in April. Teachers received feedback from the classroom observations at the first workshop, and in two additional workshops in February and May. School environments were observed in the fall and winter, and principals were interviewed during February and March. Finally, information about student attendance, dropout rate, and school achievement was collected.

The following instruments were used in this study. Items included in each of the subscales are in Appendix B. The reported reliabilities were computed using Cronbach's Alpha.

Classroom Observations

The Secondary Observation Instrument. The SRI Secondary Observation Instrument (SOI) is based upon previous observation systems developed at SRI International (formerly Stanford Research Institute). As a result of workshops conducted with teachers in Salinas, California during 1975 and 1976, revisions were made in the instrument to permit the recording of events that occur in junior and senior high school classrooms. It was used successfully in secondary classrooms in all phases of the study of the Process of Teaching Basic Reading Skills in Secondary Schools (Stallings, et al., 1979).

The SOI provides a record of instructional and social activities that occur in the classroom. It records the materials being used and the interactions between teachers and students. The observer focuses on the lead teacher and records all persons with whom he or she interacts.

The SOI contains four sections. The first section, Identification Information, identifies the schools, teachers, and classes. The second section, Classroom Summary Information, records the number of adults and students attending regularly in the classroom.

The third section is the Classroom Snapshot. The Snapshot is a matrix that yields data about the activities of each adult and student in the classroom, the size of the group, and the materials being used. From this record, information is obtained on how the teacher spends his or her time and with whom, how the aides spend their time and with whom, and how often the students work independently and in what activities.

The fourth section, the Five Minute Interaction (FMI), is used to record the teacher's verbal interactions or nonverbal behaviors. It consists of a series of frames in which each behavior or interaction is recorded in the four categories provided: Whom, To Whom, What and How. (WHO indicates the person who initiates a behavior. WHOM indicates the person(s) receiving the behavior. WHAT refers to the behavior. HOW describes the behavior.) Consecutive frames are used to record continuous interactions.

Each observation booklet has one Identification Information and Classroom Summary Information form and five sets of the Classroom Snapshot and Five Minute Interaction sequences. See Appendix C for the operational definitions of the observation variables. The instrument also yields data on student tardiness and absence.

All observers trained to collect data with the SOI passed the observer reliability test at the required 80% agreement level.

Observation Logs. After each observation, the observers recorded their impressions of the classroom, the teacher, and the school. They were asked to look for evidence of school rules and policies and to record them.

Pupil Questionnaires

The Classroom Environment Scale. This instrument was developed by Moos and Tricket (1974) and yields 12 subscales reflecting student perceptions of (1) involvement, (2) affiliation with others in the class, (3) receiving teacher support, (4) task orientation, (5) competition, (6) order and organization, (7) rule clarity, (8) teacher control, (9) teacher innovation, (10) teacher preparedness, (11) teacher clarity, and (12) utility of assignments.

School Climate Questionnaire. This 50-item instrument was developed by Donald Erikson (1979) for use in Canadian public and private schools. It has subsequently been used in a national evaluation of Teacher Corps by SRI International.

There are 12 subscales reflecting student perception of: (1) student commitment, (2) teacher commitment, (3) student reason for success, (4) school justice, (5) school in jeopardy, (6) school attractiveness, (7) student enthusiasm, (8) student self-confidence, (9) attractiveness of teacher and class, (10) friendliness, (11) difficulty of classwork, and (12) student engagement in work.

Upon inspection of the intercorrelations and items included in the two instruments, it was decided to combine some of the subscales that seemed to overlap. Thus, the following four variables were composites of the subscales indicated:

Composite Variable	Subscales in Composite Variable
Classroom On-Taskness	Involvement* Task orientation* Order* Student engagement**
Classroom Friendliness	Affiliation* Teacher support* Attractiveness** Friendliness**
Teacher Commitment	Teacher preparedness* Teacher commitment**
Teacher Discipline	Rule clarity* Teacher control*

* Classroom Environment (Moos and Tricket)
** School Climate (Erikson)

Thus, the final pupil questionnaire variables and their reliabilities were:

	Variable	Reliability
1.	Classroom On-Taskness	.82
2.	Classroom Friendliness	.83
3.	Teacher Commitment	.78
4.	Teacher Discipline	.74
5.	Class Competition	.42
6.	Difficulty of Coursework	.70
7.	Teacher Clarity	.71
8.	Utility of Assignments	.61
9.	Innovation	.50
10.	Student Reason for Success	.35
11.	Student Self-Confidence	.44
12.	Student Enthusiasm	.69
13.	Student Commitment	.85
14.	School Attractiveness	.72
15.	School Justice	.57
16.	School in Jeopardy	.28

Because of low reliabilities on subscales 5, 9, 10, 11 and 16, these variables were not used in further analyses.

Teacher Questionnaires

Duke Assessment of School Discipline. In 1977, this test was developed by Dan Duke at Stanford University and has six subscales: (1) the school as a rule-governed organization, (2) adequate data collection (reporting of student behavior), (3) conflict resolution provisions, (4) team approach to improved student behavior, (5) parental involvement, and (6) rewards and punishments. The reliability of these scales was between .88 and .95 in this study.

Rule Administration Scale. This instrument was developed by Caldwell and Lutz (1973) in their investigation of principal rule administration behavior and its relationship to educational leadership. Three types of educational leadership are assessed by the instrument: (1) "mock" rule administration, (2) representative rule-administration, and (3) punishment-centered rule administration. The reliability of the scales ranged from .90 to .94 in this sample. For clarity of interpretation, we have renamed the "representative rule" scale. Throughout the rest of the report, this scale will be referred to as "respectful leadership style".

Organizational Climate Description Questionnaire (OCDQ). This instrument was developed by A. W. Halpin in 1963. Form IV has four subtests relating to teacher behavior: (1) disengagement, (2) hindrance, (3) esprit, and (4) intimacy. In addition, there are four subscales relating to principal behavior: (1) aloofness, (2) production emphasis, (3) thrust, and (4) consideration.

Upon inspection of the items in the instrument, it was decided to combine certain items into more meaningful, conceptually clear variables. Thus, the following subscales were used in the analyses:

	Variable	Reliability
1.	Teacher Disengagement	.81
2.	Administrative Hindrance	.83
3.	Teacher Esprit/Morale	.82
4.	Teacher Intimacy	.77
5.	Principal Directiveness	.76
6.	Principal Supportiveness	.88

Classroom Description Rating Scale. This instrument was developed by Stallings and Kaskowitz in 1974 to measure teachers' descriptions of their classrooms in terms of "openness" or "structuredness". The reliability in this sample was .95.

The Responsibility for Student Achievement Questionnaire. This 30-item instrument assesses teacher acceptance of responsibility for student performance. Each item describes a routine positive or negative student achievement experience. One response alternative states that the event was caused by the teacher and the other states a cause outside of the teacher's immediate control. Teachers selected one or the other alternative. (See Appendix B.) The two subscales are (1) responsibility for student success (reliability: .98) and (2) responsibility for failure (reliability: .96).

Teacher and Classroom Information. This information form was filled out by all teachers. It yields information about teacher experience, teacher training, students, and aides.

Principal Interview

The interview questions were designed specifically for this study. All eight interviews were conducted by the principal investigator, Jane Stallings. Principals were asked about: (1) experience and education, (2) student body, (3) school staff, (4) extra-curricular activities, (5) staff communication patterns, (6) school policy, (7) categorical funds, (8) staff development, (9) organization for working with students, (10) student data availability, (11) student scheduling, (12) grading systems, (13) parent contact, and (14) school problems.

Physical Environment Observation

This instrument was developed at Stanford Research Institute for use in a national evaluation study of Teacher Corps. Ratings were made throughout the school day on: (1) litter, (2) graffiti, (3) social climate, (4) adult supervision, (5) students out of class, and (6) integration. For instance, coders rated "litter" and "students out of class" before school started, during class, between classes, during lunch, and after lunch. Two Stanford graduate students were trained to use this instrument and achieved satisfactory reliability.

CHAPTER III

PROCEDURES

A primary focus of this study was to collect data that accurately reflected (1) school structure and organization, (2) teachers' instructional processes, and (3) student and teacher outcomes. Thus, it was essential that data be gathered in a consistent fashion in all classrooms at all sites. To do this, staff were carefully selected and trained for accuracy and reliability. The staff at the Teaching And Learning Institute (TALI) have had extensive experience in such training.

Selection of Classroom Observers

During late August and early September, TALI attempted to hire eight observers by contacting substitute teachers of the participating districts and Stanford University graduate students. Five substitute teachers and four graduate students agreed to attend the seven-day training session. Three substitute teachers dropped out of the training due to a local teachers' strike or personal problems. Thus, six observers were trained and conducted the fall classroom observations.

In the winter, one graduate student and one substitute teacher were not able to observe. Thus, three Stanford graduate students, one substitute teacher, the principle investigator, and the observer trainer conducted the winter observations.

In the spring, three Stanford graduate students were trained to use the observation system. The spring observations were conducted by four graduate students, one substitute teacher and the principle investigator.

Training of Classroom Observers

Fall, 1980

Those selected as observers received a home training kit with materials to be studied seven days before the observation training session. Trainees were required to memorize the definitions and to have a thorough understanding of all codes by the first day of training.

Observation training began on September 8th and concluded on September 16th. Most of the training time consisted of showing trainees video tapes of actual secondary classrooms, coding the tapes with the observation system and discussing any questions or confusions that arose from the coding. On the third through fifth mornings, trainees conducted practice observations in high school classrooms. These practice observations were approximately

1½ hours in length. The trainees then returned to the training room and discussed any coding problems that arose during that time.

In addition to the coding from video tapes and the classroom observations, trainees were assigned coding exercises to complete in the evening. These were dialogues of classroom situations. Each morning the work from the previous evening was reviewed and discussed.

Throughout the training session, reliability checks were conducted. The trainees and trainer coded a video tape and a tally was made of the frequency of each code by an individual observer. This procedure assisted the trainer in knowing with which code(s) an individual trainee might need additional help.

A final reliability test was given on the last day of training. All observers reached or exceeded the required 80% agreement level.

Winter, 1981

On January 4, 1981, a four-hour refresher training session was conducted. On January 5th, a reliability test was conducted. All observers met the required reliability level.

Spring, 1981

Three new observers were trained between April 13th and 24th. The training procedures were the same as those used in the fall. All three new observers reached or exceeded the criterion agreement level. The fall and winter observers also met the criterion level at that time.

Data Collection Procedures

Fall, 1980

Observers began conducting classroom observations on Wednesday, September 17, and concluded by October 6th. Observations were conducted for three consecutive days during the same class period in each of the original 43 teachers' classrooms. An attempt was made to avoid observing classes during extended testing, films, or shortened periods. In this way, a picture of the teachers' typical teaching processes could be gained.

In October, two Stanford graduate students were trained in a two-hour session to collect the Physical Environment Observation data and to administer the pupil questionnaires. The teacher was given the teacher questionnaire to fill out and was asked to leave the room during the pupil questionnaire administration. A standardized set of directions was read to the pupils and then the questionnaire items were read aloud as the students filled in the forms. The two graduate students also observed the school environment and completed the School Environment Observation Form while they were at the school.

The Teacher and Classroom Description Forms were distributed to teachers in September and were collected by the observers in October.

Winter, 1981

The classroom observations began on January 6th and were completed by February 6th. Again, all teachers were observed on three consecutive days during the same class period.

The principle investigator interviewed the eight principals with the aid of an assistant during February and March. Each interview lasted approximately two hours and was transcribed immediately by the assistant.

The principle investigator and her assistant completed Physical Environment Observation Forms on the same day that they conducted the interviews.

Spring, 1981

The final round of three classroom observations for each teacher was conducted between April 16th and 30th.

Pupil questionnaires were administered in May to all classrooms remaining in the study. In addition to the original low-ability classes, each teacher picked one of his or her "high-ability" classes to take the questionnaire. In this way, average or high-achieving pupil perceptions of the class and school were acquired.

During the May pupil questionnaire administration, teachers filled out teacher questionnaires.

The pupil and teacher questionnaires administered in the spring were identical to those administered in the fall.

Table 8 shows the number of teachers or pupils for whom data was collected during the fall, winter, and spring.

Table 8
Number of Students and Teachers Assessed

	Total number of students or teachers		
Instruments	Fall 1980	Winter 1981	Spring 1981
Secondary Observation Instrument	43	33	32
Pupil Questionnaire: Low Ability	793		543
High Ability	0		179
Teacher Questionnaire	43		32

Workshops

One question addressed by this study was: Do teachers in schools with clear and consistent policies show more improvement after inservice training than they do in schools with less clear and consistent policies? Another question was: Do teachers implement the Effective Use of Time training program to a greater degree in schools with supportive principals and clear and consistent policies? To investigate these questions, all teachers were trained to use research-based effective teaching practices in five workshops. Pre- and post-training classroom observations assessed the amount of change. Training was provided by Margaret Needels and Jane Stallings. These two researchers had developed and conducted the original training program. The eight training groups met with one of the trainers at their own school each week. The training schedule was as follows:

School	Day	Time	Trainer
1	Monday	12:30 - 3:00	Jane Stallings
2	Monday	3:00 - 6:00	Margaret Needels
3	Wednesday	3:30 - 6:00	Margaret Needels
4	Thursday	2:45 - 5:00	Jane Stallings
5	Tuesday	9:40 - 12:00	Jane Stallings
6	Thursday	2:30 - 5:00	Margaret Needels
7	Thursday	12:30 - 3:00	Jane Stallings
8	Tuesday	3:30 - 6:00	Jane Stallings

Before each workshop, teachers were given a home study packet to read for that specific workshop. This gave teachers the opportunity to read the materials before the workshops; therefore, time at the workshops could be used more constructively by discussing and elaborating on ideas contained in the materials. In addition, teachers conducted "homework" activities in their classrooms. For example, teachers filled out self-feedback instruments regarding distribution of response opportunities, or student academic engagement throughout the class period. These instruments provided a focus for discussion at the next workshop. Throughout all workshop sessions, the leaders encouraged group interaction among the participants. The tone of the workshops was one of support. Teachers were not lectured to; they were encouraged to share opinions, experiences and problems. The opportunity to discuss problems encountered in their classrooms in a supportive, non-evaluative environment was an aspect of the workshops that many teachers stated was very positive and unique in their experience of inservice training.

Workshop I

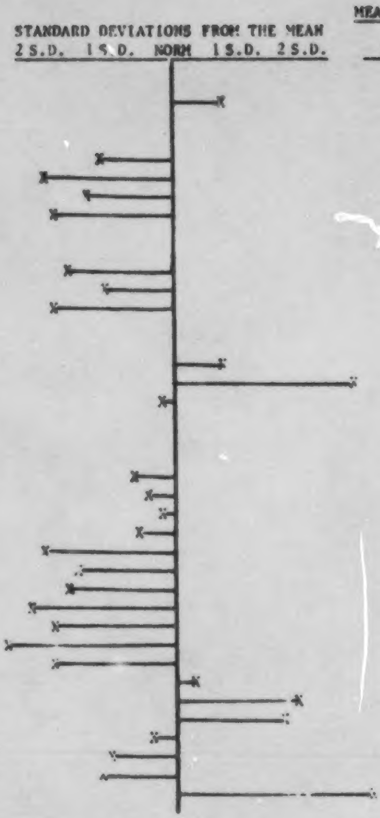
The home packet for Workshop I summarized the findings from Phase I and II of the Stallings et al. (1979) research on basic reading skill instruction in secondary schools. It also gave teachers an overview of the workshop sessions. The trainers explained Jane Stallings' research program and interpreted the research findings. Teachers were given their profiles (see example in figure 2) and a table identifying teaching practices that research has shown to be effective for specific levels of students. It was stressed that if there was a wide range of student abilities in their classes, they would have to consider the recommended behaviors in terms of ability groups within the class rather than the class as a whole. Teachers were asked to bring the reading scores of their students to the first meeting.

Preparation of Teacher Profiles. The content of Workshop I focused on the teacher profiles. After all observations had been completed and the data was processed, individual teacher profiles were prepared based on the three days of observation in each classroom. Phase I of the Stallings et al. (1979) research had identified teaching processes that appeared to be related to students' achievement in reading. The observation variables that reflected these teaching processes were those selected for the teachers' profiles.

Each teacher had selected one class for study and was observed for three days during fall, winter, and spring. The frequency of occurrence of each variable was averaged for the three days. This averaged frequency was reported as the teacher's score for each variable. A score for each observation variable was then converted to a z score. A computer printout listed the teachers' z scores on each of the selected variables. Each teacher could then visually identify where his/her score on each variable was in relation to the mean of all teachers in the original study (See Figure 2). The line down the middle is the norm for all teachers. The first column on the right is the mean of all teachers. The second column is the individual teacher's baseline score.

The snapshot variables (called "activities / % of time spent") listed in the top half of Figure 2 were computed in terms of percentage of time anyone was involved in those activities during the period. The Five Minute Interaction data (called "teacher interactions-frequencies") shown on the bottom half of Figure 2 are in terms of frequency of occurrence over the three days. During a class period, an average of approximately 300 interactions would be recorded by the observer. Therefore, the teacher in Figure 2 was observed to have 209 interactions regarding reading during the 45-minute period. The mean for all teachers was 200.

Interpretation of Teacher Profiles. The trainers interpreted each teacher's profile individually to be



ACTIVITIES / % OF TIME SPENT	R*	NORM	TEACHER BASELINE	TEACHER POST
Preparation				
Making assignments / passing materials	L	157	197	
Interactive Instruction				
Instruct	M	20	14	
Review / discuss	M	10	3	
Drill and practice	M	2	0	
Oral reading	M	9	2	
Non-Interactive Instruction				
Writing	M	25	12	
Silent reading	O	9	6	
Teacher working alone	O	15	7	
Off-Task				
Socializing	L	4	6	
Sleeping / staring	L	5	15	
Disciplining	O	1	0	
TEACHER INTERACTIONS (FREQUENCIES)				
Teacher speaks to one student	O	89	77	
Teacher speaks to small group	O	13	16	
Teacher speaks to everyone	O	45	41	
Teacher calls on different students	O	26	22	
Teacher instructs	M	63	34	
Teacher asks questions	M	40	11	
Students respond	M	39	10	
Teacher praises or supports	M	12	3	
Teacher corrects	M	13	5	
Teacher guides and corrects	M	5	0	
Students read aloud	M	12	4	
All reading and task statements	O	200	209	
All assignment or organizing statements	L	50	88	
All behavior statements	L	10	21	
Teacher social statements	O	6	4	
Teacher working alone	O	30	21	
Positive interactions	M	[illegible]	1	
Negative interactions	L	2	18	

*R = Recommendations: M = Do it more than the norm.
L = Do it less than the norm.
O = The baseline performance is OK and should be maintained.

Figure 2

PROFILE OF MARY ADAMS

certain the teacher understood the format of the profiles and the manner in which they were to be interpreted.

It was not suggested that a teacher function at the norm of all teachers since the correlational data suggested that classrooms scoring higher (or lower in some cases) than the mean on these variables had students who gained significantly more than did students in other classrooms. The trainers recommended that teachers increase or decrease the behavior so that it occurred at lease one-half a standard deviation above or below the mean depending upon whether the relationship with student reading gain was positive or negative. For example, teachers correcting student behavior was negatively related to reading gain. This variable occurred on the average of ten times per class period, thus teachers were encouraged to reduce the number of statements they had to make about behavior to several fewer than ten. Mary Adams made 21 statements about behavior during her baseline observation. Thus she was encouraged to examine her behavior control system and try to reduce the misbehavior through more appropirate assignments and clear and consistent expectations for students' behavior. These recomendations were based on the reading level of her students.

Based on the profile that is shown in Figure 2, the following recommendations were made to Mary Adams, who had a homogeneous group of low-achieving students:

Try to increase:

- Instruction
- Review and discussion of reading assignments
- Drills and practice
- Reading aloud
- Writing activities
- Asking questions--which result in student responses
- Praise and support
- Corrective guidance
- Positive interactions

Try to decrease:

- Making assignments -- passing materials
- Student off-taskness: socialization, sleeping and staring
- Assignment and organizational statements in class
- Behavior statements
- Negative interactions

The findings of Phase I had identified effective teaching processes based on the reading level of the students. The teachers' profiles were then interpreted according to the reading level of each student in the class. Figure 3 shows the form developed to assist in the interpretation of the profiles. All selected variables are listed on the

	STUDENT LEVEL OF ACHIEVEMENT			FALL RECOMMENDED CHANGES	WINTER CHANGES
ACTIVITIES / % OF TIME SPENT	LOW	MEDIUM	HIGH		
Preparation					
Making assignments / passing materials				___	___
Interactive Instruction					
Instruct				___	___
Review / discuss				___	___
Drill and practice				___	___
Oral reading				___	___
Non-Interactive Instruction					
Writing				___	___
Silent reading				___	___
Teacher working alone				___	___
Off-Task					
Socializing				___	___
Sleeping / staring				___	___
Disciplining				___	___
TEACHER INTERACTIONS (FREQUENCIES)					
Teacher speaks to one student				___	___
Teacher speaks to small group				___	___
Teacher speaks to everyone				___	___
Teacher calls on different students				___	___
Teacher instructs				___	___
Teacher asks questions				___	___
Students respond				___	___
Teacher praises or supports				___	___
Teacher corrects				___	___
Teacher guides and corrects				___	___
Students read aloud				___	___
All reading and task statements				___	___
All assignment or organizing statements				___	___
All behavior statements				___	___
Teacher social statements				___	___
Teacher working alone				___	___
Positive interactions				___	___
Negative interactions				___	___

Figure 3
RECOMMENDATIONS FOR THREE ACHIEVEMENT LEVELS FORM

left side; the next three columns represent the students' reading level. The levels used were low, medium and high. Teachers were asked to bring a listing of their students' reading test scores and were given specific recommendations of what to do when working with students with different reading abilities.

Workshop II

The reading skills that students needed to develop were the focus of Workshop II. Several diagnostic tests were suggested for use as well as sources for obtaining appropriate materials for high school students who needed remediation. Methods to calculate the readability of textbooks were presented. This procedure is of special importance to science and social studies teachers who are likely to find their texts beyond the reading level of many students. Ways of dealing with vocabulary, reading comprehension, and reading in the content area were discussed.

Workshop III

This workshop focused upon making good use of the total class period. Efficient means of making assignments and making expectations clear for quality and quantity of work were discussed. If classrooms had students of different achievement levels, teachers were guided to teach two or three groups to accomodate these differences. Lesson plans for several groups or models of group instruction were provided and teachers were encouraged to plan two or three activities for each group rather than just read silently or do written work all period.

Workshop IV

Because so many behavior variables were found to be negatively correlated with reading achievement, this workshop provided specific recommendations for behavior management. Each teacher received a packet to read before the session. During the session, the leader asked the teachers what was the most difficult behavior problem they had to handle the past week. In each of the prior sessions, the teachers had eventually mentioned the same problems: tardiness, absenteeism, arguments, shouting out demeaning remarks and physical fights. The leader asked how each teacher handled such situations. Ways of handling such situations were suggested by the teachers and the trainers. Teachers then formulated recommendations based on the research findings and group suggestions. Techniques for motivating students toward good behavior and achievement were also discussed in the fourth session.

Workshop V

This workshop provided instruction and practice in a direct method of providing instruction, questioning and feedback. Teachers were encouraged to provide some verbal instruction and ask students (by name -- not volunteers) to respond. If the response was correct, the teachers provided specific praise or acknowledgement feedback to the student that answered correctly. If the response was incorrect, the teachers were trained to provide some form of positive corrective feedback. Such feedback might be to probe by asking the question differently, or to provide some more information.

Workshops VI and VII

These one to two-hour workshops were conducted by the trainers after observations at the end of each semester to see whether recommendations from the earlier workshops were followed. New profiles were prepared for each teacher so that they could be compared with the first profile to examine changes in teacher behavior. Feedback based on these profiles of teacher behavior was given to each teacher individually. Recommendations for continued behavior change was made.

Chapter IV

ANALYSIS AND RESULTS

An attempt has been made to identify linkages between school, teacher and student variables. The variables and the relationships to be examined are presented in Figure 4.

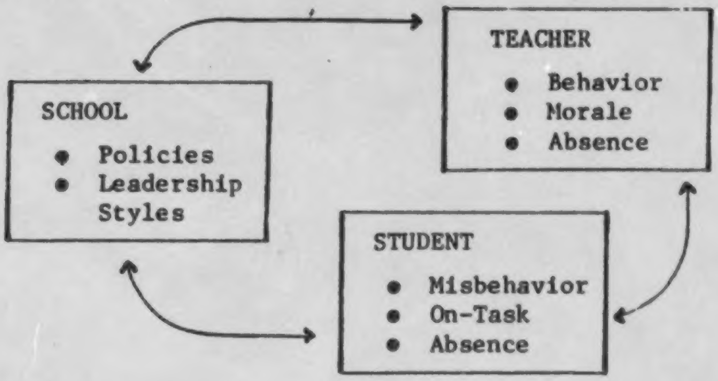


Figure 4
ANALYSIS DESIGN

Each hypothesis is treated in terms of the analyses, the variables and the results. Several additional analyses of general interest are included at the end of the chapter. Pearson Product Moment correlations, rank-order correlations, and descriptive statistics have been used in these analyses. The items included in the teacher questionnaire subscales are listed in Appendix B. Raw data are available upon request. Discussion of the overall findings and the linkages are reserved for the final chapter.

Hypothesis 1: Students and teachers will have lower absence rates in schools where the policies and rules are clear and consistently administered.

Analysis

To examine this hypothesis, an estimate of student and teacher absence was made for each school. Schools were ranked for clarity of policy and consistency of application. Rank order and Pearson Product Moment correlation coefficients were then computed between average pupil absence and school policy clarity and consistency rankings for each school. With a sample size of only eight, the correlation coefficient must be greater than .51 to attain the .10 significance level and greater than .63 to reach the .05 level. The coefficient must be greater than .79 to reach the .01 significance level. Because of the small number of schools in the analysis, scatterplots were examined for outliers which might cause spurious results. Scatterplots for the primary findings are presented in Appendix D.

School Policy Clarity and Consistency Variables

To examine the proposed hypotheses, we first needed to rate schools on a continuum of policy clarity and consistency. Information regarding (1) the clarity of schools' policies and rules, and (2) consistency of enforcement was gathered from several sources. A primary source was the teacher questionnaire. The teachers responded to open-ended questions about their schools' absence, tardiness and delinquency policies. They were also asked to describe how the policies were enforced. Another source was the principal interview where principals were asked about their school policies and methods for enforcement. Finally, much informal information regarding school rule structure and consistency was offered by the teachers during the series of workshops.

All of this information was recorded onto a form which described each school in terms of clarity and enforcement of (1) absence policies; (2) tardiness policies; and (3) closed (or open) campus policies. Independently, the principle investigator and project coordinator rated each school according to clarity and enforcement of absence rules and closed or open campus policy. A point was assigned for clarity or consistent enforcement on each policy area. Where the policy was unclear or not enforced, no points were assigned. For example, where most teachers in a school were able to accurately report the school policy for absence, clarity of rules was assumed. Where enforcement of rules was lax, teachers reported this information. In the few cases where schools were not on either end of the scale, one-half point was given. Next, the points were summed and schools were assigned rankings on a continuum of more or less structure and enforcement of rules.

The agreement between the two raters was almost perfect. In only one case was there a lack of agreement -- on the rankings of two middle-continuum schools. It was decided to give these two schools equal rankings, since it was impossible to say which was more structured than the other. To check the validity of our rankings, a correlation coefficient was computed between our Policy and Clarity and Consistency ranking and the teacher questionnaire subscale, Rule Governed Organization. This measure was part of the School Rules questionnaire; teachers rated their schools on a scale of 1 to 5 on clarity, communication and enforcement of rules. Teacher ratings were averaged to create school scores. Our Policy Clarity rankings correlated .77 ($\underline{p} < .05$) with the teachers' ratings of their schools on Rule Governed

Organization. By the end of this process, each school was ranked according to policy clarity and consistency of enforcement and had a score on the Rule Governed Organization subscale.

Student Absence Rate Variables

An estimate of absence rate for students was obtained from observations of classes in the study during three class periods in fall, winter and spring. This provided nine class periods per class for the estimate of average absenteeism for the schools in our sample. This absence rate turned out to be higher than the school's own reported absence rate. Most schools reported only the numbers absent during the second period. We have reported the actual absences in the classrooms of our study.

Teacher Absence Rate Variables

Teacher absence rate was obtained from schools and district offices at the end of the school year. The average number of substitutes hired each day was divided by the number of staff to obtain an average percentage of teachers absent. This tended to be sensitive information and was difficult to obtain in some cases. Since the figures reported by the schools were based on number of substitutes hired each day, it was difficult to separate staff inservice release time from true absence.

Student Absence Rate Results

Most schools tended to have less absenteeism in the fall and more in the spring (See Table 9). There was one outstanding exception. School E had a different principal for the winter and spring observations. The absence policy was clarified during this time. Parents were called in the evenings in an attempt to reduce student absenteeism. This policy was quite effective. The observed absence rate changed from 27% in the fall to 11% in the spring. This change of policy in School E contributed to the reduction of the correlations in the winter and spring. Schools F and H were selected for closing during mid-year. By spring, student absence rates had nearly doubled in those two schools. School A ranked lowest on Policy Clarity and Consistency and had the highest percent of students absent in the classes observed in the fall. School C ranked highest on this scale and had the lowest overall observed absence rate.

Table 9
School Policy Clarity and Consistency and Student Absence Rates in Fall, Winter and Spring

School	*Rank Order for Policy Clarity and Consistency	Average Percent Absent Fall	Winter	Spring
A	(1.0)	35%	40%	43%
B	(2.0)	19%	17%	19%
C	(8.0)	11%	24%	13%
D	(3.5)	18%	25%	23%
E	(3.5)	27%	16%	11%
F	(5.0)	18%	31%	37%
G	(7.0)	18%	25%	31%
H	(6.0)	16%	26%	28%

*Rank of 1.0 is least clear and consistent, and a rank of 8.0 is most clear and consistent.

As shown on Table 10, there were high correlations ($p < .01$) between seasonal absence rates and Rule Governed Organization and Policy Clarity and Consistency.

Table 10
Correlations Between School Policy Variables and Student Absence Rates

School Policy Variables	Average Percent Absent Fall	Winter	Spring
Correlation with Policy Clarity and Consistency	-.86**	-.17	-.25
Correlation with Rule Governed Organization	-.79**	-.10	-.15

** $p < .01$

Thus, we conclude that the hypothesis regarding student absence was sustained -- clear school policies and consistent enforcement of rules were found to be significantly related to student absenteeism in the fall. Other school factors impinged upon students' decisions to attend or not attend school in winter and spring. However, it is important to note that School A, which was least clear and consistent about school rules, had the greatest percent of students absent fall, winter and spring.

Teacher School Absence Rate Results

Correlations were computed between daily teacher absence averages, School Policy Clarity and Consistency, and Rule

Governed Organization. No significant correlations were identified in the analysis. The fact that some schools could not separate absence due to illness from absence due to personal leave or staff development made the data suspect for analysis purposes. Nevertheless, the fact that such teacher information was or was not available indicated something about the schools' organizational structures. Only for Schools C and H was teacher absence information available at such specific levels. We continue to believe that this is an important variable and would plan for a more systematic method of collecting this information in the future.

Hypothesis 2: Teacher and student morale will be higher in schools where the principal leadership style is supportive.

Analysis

In order to examine this hypothesis, Pearson Product Moment correlation coefficients were computed between teacher and student morale variables and principal leadership style variables. An inspection of scatterplots indicated the relationships are for the most part systematic and free from outliers. Scatterplots of these correlations are presented in Appendix D. The relationships between teacher morale and principal leadership styles are presented first. The student morale findings will be discussed later in this section.

Quantification of Variables. All teacher questionnaire variables were based on ratings ranging from 1 to 4 (OCDQ) or 1 to 5 (other subscales); e.g. (1) Rarely Occurs, (2) Sometimes Occurs, (3) Often Occurs, or (4) Very Frequently Occurs. Teacher ratings were averaged to form school scores.

All pupil questionnaire subscales but one contained True/False items. To convert the subscales values to a common metric, a linear transformation was performed on these data. Subscales containing four items were transformed in the following manner. The four item scores (true = 1; false = 0) were added together and divided by four. If there were two items, the sum of the two scores was divided by two, and so on. The resulting scores on the pupil questionnaire variables ranged from 0 (false) to 1 (true). One variable, Pupil Commitment, was a rating scale and ranged from 1 to 5.

Teacher Morale Variables

Teacher morale and related variables were measured by four separate subscales on the fall teacher questionnaire and one subscale on the fall pupil questionnaire. (1) Teacher Esprit/Morale was measured by the OCDQ Esprit subscale. The scale included questions such as, "The morale of teachers is high."; "The teachers accomplish their work with great vim, vigor, and pleasure."; "Teachers show much school spirit."; and "Teachers spend time after school with students who have individual problems." (2) Teacher Commitment: Pupils responded "True" or "False" to statements about their teacher's commitment to teaching. This subscale included items such as, "This teacher really tries hard to do a good job." and "The teacher is usually well-prepared for class." (3) The Intimacy subscale (OCDQ) contained questions such as, "Teachers invite other faculty members to their homes." and "Teachers' closest friends are other facult members at this school." (4) The Disengagement subscale (OCDQ) assessed teacher divisiveness, dissatisfaction with work, and lack of participation in school activities. (5) On the Responsibility for Failure subscale, teachers chose one of two reasons for student failure: factors influenced by the teacher, or factors influenced by the students (or external circumstances). A typical item was, "When your students do poorly on a test, it is (a) because they didn't really expect to do well, or (b) because you didn't insist they prepare adequately."

Principal Leadership Variables

Principal Leadership Styles were measured by three separate subscales on the fall teacher questionnaire. (1) The Principal Supportive subscale (OCDQ) reflected principal helpfulness, consideration, preparedness, and concern, (2) Principal Respectful Style was part of the Leadership Style questionnaire. In this subscale, when principals more often assumed that teachers had good reasons for not complying with school policies, they were rated higher on the "Respectful" subscale. (3) The Principal Directiveness scale (OCDQ) included items about degree of principal control and communication with teachers. Principals high on this subscale tended to use a "top-down" approach by making most of the decisions for the teachers (non-collaborative) and by being rather insensitive to input or feedback from teachers (poor communication).

School Policy Variables

School policies were assessed in the fall on three dimensions. (1) Policy Clarity and Consistency was a ranking by the investigators. This process was described under Hypothesis 1. (2) Rule Governed Organization was a measure of collaboration in rule making; and rule communication, clarity, fairness, and enforcement. (3) The Administrative Hindrance subscale (OCDQ) reflected teacher reports of burdensome duties and lack of administrative support services.

Student Morale Variables

The four student morale variables were measured in the fall and are described here. (1) The Class Friendliness variable was created by combining four subscales from the two pupil questionnaires: The Classroom Environment Scale and the School Climate Questionnaire. The resultant composite variable reflected student friendliness, teacher friendliness, and the students' liking of the class and teacher. (2) In the Student Commitment subscale of the School Climate Questionnaire, students were asked how willing they would be to participate in school activities (e.g., car wash, parent's night, student orientation, fund raisers) during the evening or on weekends. (3) The Student Enthusiasm subscale contained items such as, "I really enjoy my work at this school.", and "I am proud of my school work." (4) School Justice reflected student perception of the fairness of rewards and punishments for school work and behavior.

Teacher Morale Results

Of the 24 correlations between teacher morale variables and school policy and leadership variables in Table 11 (in the box), 12 were significant at the .05 level. Note that at this significance level, only one or two of these correlations were likely to occur by chance. These findings suggest that teacher morale and commitment were higher where school rules were clear, well-communicated, and enforced; and where principals were collaborative and respected teachers' judgement and integrity. In schools where principals more often made decisions for teachers and were less open to teacher input and ideas, teacher morale was lower. Morale was also lower in schools where teachers were asked to perform extra duties and had little administrative office support.

Where principals respected teachers' judgements and were collaborative and communicative, teachers tended to: enjoy and value their colleagues more; be more involved in and satisfied with the school; and demonstrate a greater commitment to quality teaching. In schools where teachers reported burdensome administrative duties and inadequate support services, their commitment to do a good job of teaching tended to be lower. Finally, where principals were supportive, teachers seemed to feel greater personal responsibility for student failure ($\underline{r} = .73$).

Principal Leadership Style and School Policy Results

Two of the three principal leadership style variables related quite markedly to the teacher and school policy variables. Where principals showed respect for teacher judgement, teachers reported higher morale ($\underline{r} = .86$), more staff social interaction ($\underline{r} = .88$), and greater satisfaction and participation in their work ($\underline{r} = -.70$). Students rated teachers at such schools as more committed to doing a good job ($\underline{r} = .69$). This style of leadership was related to all three school policy variables ($\underline{p} \le .05$). Respectful principals were more

Table 11
Correlations Between Teacher Morale Variables, Principal Leadership Styles, and School Policy
(N = 8)

	TEACHER MORALE				PRINCIPAL LEADERSHIP STYLES			SCHOOL POLICY		
	Esprit/Morale	Commitment	Intimacy	Disengagement	Supportive	Respectful	Directive	Clear and Consistent	Rule Governed	Hindrance
TEACHER										
Esprit/Morale	1.00									
Commitment	.68**	1.00								
Intimacy	.73**	.57	1.00							
Disengagement	-.79***	-.43	-.81***	1.00						
PRINCIPAL LEADERSHIP STYLES										
Supportive	.10	.41	.48	-.12	1.00					
Respectful	.86***	.69**	.88***	-.70**	.23	1.00				
Directive	-.96***	-.73**	-.63**	.79***	-.04	-.76**	1.00			
SCHOOL POLICY										
Clear and Consistent	.57*	.36	.48	-.39	-.01	.76**	-.42	1.00		
Rule Governed	.83***	.63**	.49	-.50	.18	.73**	-.75**	.77**	1.00	
Hindrance	-.85***	-.66**	-.43	.47	.18	-.72**	.87***	-.43	-.65**	1.00

$* p < .10$ $** p < .05$ $*** p < .01$

likely to be collaborative, clear, and consistent about school rules and policies; to provide more administrative support services; and to require fewer burdensome duties from their teachers.

Principals who were rated high as being directive were not very collaborative in their decision making and communicated poorly with teachers. In the schools of such principals, teachers reported lower morale, less intimacy with colleagues, and were less involved and satisfied with their work. There was a negative correlation with Rule Governed Organization, suggesting that more directive principals were less likely to share responsibility for developing rules and did not communicate school rules very well (r=.75). Such principals also tended to require teachers to perform burdensome duties. Further, in these principals' schools, fewer administrative support services were available to teachers (r = .87).

Student Morale Results

Each of the four variables used to assess student morale seemed to measure different aspects of morale. There was little correlation among them (r's = .23, -.47). There was considerable variation in the morale of students at different schools (See Table 12). However, no school was consistently highest or lowest on all of the variables. School H was highest on Student Enthusiasm and School Justice. Unfortunately, this school was selected for closing in the spring. Students at School E reported the least friendliness in the classes (56% of the students found it friendly) and indicated the least amount of student enthusiasm for their work (only 39% expressed enthusiasm). Our sample of students at this school included primarily low-achievers. Yet, this school was well-known for its high test scores. Consequently, these low achieving students may have viewed their classes with less positive feelings.

Table 12
Means and Standard Deviations On
Student Morale Variables
(Fall Data)

	Class Friendliness		Student Commitment		Student Enthusiasm		School Justice	
School	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.
A	.69	.20	2.88^{+}	.65	.58	.30	.50	.30
B	.66	.23	2.38	.66	.45	.33	.61	.31
C	.70	.19	2.56	.79	.57	.34	.62	.31
D	$.73^{+}$	.24	2.11^{-}	.76	.43	.34	$.39^{-}$	.34
E	$.56^{-}$	.27	2.35	.74	$.39^{-}$	.34	.56	.33
F	$.73^{+}$	.22	2.38	.72	.49	.35	.53	.34
G	.66	.23	2.14	.71	.50	.32	.49	.33
H	.70	.19	2.78	.71	$.64^{+}$	.34	$.63^{+}$	.31

+ - highest score   - = lowest score

The school averages on the student morale variables were correlated with the three principal leadership style variables and the three school policy variables. Of the 24 correlations on Table 13, four were significant ($p < .10$). All of these relationships were with Class Friendliness. This variable included teacher and student friendliness plus students liking the class and teacher. It appears that students experienced this friendliness in schools where the principal's leadership style was respectful and not overly directive. That is, the principal was more collaborative in his relationships with teachers. There was also a trend for students to experience more friendliness where principals were more supportive ($\underline{r} = .41$).

School policies that were collaboratively formed, consistent and well-communicated also related to class friendliness. These data suggest a three-way relationship. In schools where principal's leadership style made teachers feel respected and a part of policy making, the teachers had higher morale, felt easier and happier in their classrooms and, consequently, the students did also. A negative relationship was found between class friendliness and hindrance ($\underline{r} = -.66$). This means that teachers who had fewer administrative support services and were required to carry out extra duties provided less positive classroom environments. In these cases, students rated the class as being less friendly.

The school justice variable had the only other significant relationship with principal leadership or school policy variables. Students felt school justice to be greater where the principal's style was respectful. This meant that teachers in these schools felt the principal respected their judgement and integrity. In such schools, students felt the staff was fairer in giving rewards and punishments. The school scores ranged from 39% to 63% of the students reporting satisfactory school justice. This meant that, on the average, nearly 50% of the students felt the justice system was unfair.

The percent of students feeling enthusiastic about school was also quite low. Overall, only 50% reported liking their work and being proud of it.

The student commitment scale contained six items about extra curricular activities to help their school. The highest score possible was five. All school scores were in the middle range.

These data suggest that about 50% of the students in our sample were not very enthusiastic or committed to their schools. These variables were examined for differences by students achievement levels, ethnic groups and sex. These analyses are at the end of this chapter.

Table 13
Correlations Between School Student Morale Variables, Principal Leadership Styles and School Policy
(N = 8)

	Student Ratings of:			
	Class Friendliness	Commitment to School	Enthusiasm for School Work	School Justice
Principal Leadership Styles				
Supportive	.41	.39	.43	.37
Respectful	.69**	-.17	.17	.51*
Directive	-.73**	.45	.24	-.14
School Policy				
Clear and Consistent	.36	-.18	.33	.27
Rule Governed	.63**	-.16	.21	.18
Hindrance	-.66**	.29	.31	-.35

* $p < .10$ ** $p < .05$

If only two aspects of student morale, Class Friendliness and School Justice, are considered, the hypothesis regarding school policies and student morale was confirmed. In this case then, schools with clearer, more well-communicated policies that provided a collegial atmosphere, had students with higher morale. The Enthusiasm and Commitment components of Hypothesis 2 were not confirmed.

Hypothesis 3: Teacher morale will be higher where staff meetings are frequent and are rated as productive and interactive.

Analysis

To examine this hypothesis, correlations were computed between teacher morale variables and staff meeting characteristics.

Teacher Morale Variables

The measure of teacher morale used in this analysis was the Esprit subscale of the OCDQ. This measure and the quantification of the morale variable have been described under Hypothesis 2.

Staff Meeting Variables

The frequency of meetings and the schedule for school meetings was described by the principal in the principal interview. The Productivity rating of schools was derived from questions on the OCDQ referring to the wandering, off-task nature of meetings. Finally, the Interactive Nature of meetings was rated by teachers on the OCDQ item, "The staff meetings are mainly principal report meetings." The Productivity and Interactive variables were quantified in the same manner as were the other teacher questionnaire variables.

Results

Table 14 shows the number of school faculty meetings held per year and the frequency of whole or partial staff meetings. The number of school staff meetings held per year varied widely among the eight schools. Some schools had none and others had as many as nine. Where no school staff meetings were conducted, principals tended to meet with department chairmen as needed, or on a weekly basis.

Table 14
Frequency of Staff Meetings

	School Designation							
Variable	A	B	C	D	E	F	G	H
Number of meetings with the principal per year	0	9	9	9	1	9	1	9
Number of meetings with department heads	W	18	9	18	W	18	A/N	18

W = Weekly A/N = As Needed

Several of the principals met with their staffs each month by meeting during first period with all teachers who had that period as their preparation period. The following period the principals met with all teachers who had the second period as a preparation period. They then continued to meet with teachers during each preparation period throughout the day. This allowed the meetings to be small and interactive. It also allowed teachers to get acquainted with teachers in other departments. Teacher reports have indicated that when only departmental meetings are conducted, teachers often do not know other teachers in the school.

Table 15 shows the correlations between Teacher Morale, Number of Meetings, Productivity, and the Interactive Nature of the meetings. As predicted, the frequency of staff meetings was related to teacher morale ($\underline{r} = .55$). Thus, in the schools studied, teachers tended to have higher morale where they met with the principals more often.

The interactive nature of the meetings also related to teacher morale ($r = .86$) as did the productivity of the meetings ($r = .62$). Interestingly, where more staff meetings were held, teachers tended to rate them as more interactive ($r = .61$).

Table 15
Correlations Between Teacher Morale
and Characteristics of Staff Meetings
(N= 8)

	Esprit/ Morale	Number of Meetings	Interactive Nature	Productivity
Esprit/Morale	1.00			
Number of Meetings	.55*	1.00		
Interactive Nature	.86***	.61*	1.00	
Productivity	.62*	.40	.36	1.00

* $p < .10$ **$p < .05$ ***$p < .01$

On the basis of these results, we may conclude that Hypothesis 3 was supported. That is, where staff meetings were frequent, interactive, and productive, teachers tended to have high morale.

Finally, it is of interest to note that significant correlations were found between Number of Meetings and Rule Governed Organization ($r = .65$, $p < .05$) and Principal Supportiveness ($r = .61$, $p < .10$). Thus, where the number of staff meetings was greater, teachers tended to report higher principal supportiveness and clearer, more consistent policies. It is important to note that it was not just the number of meetings, but the nature of the meetings that related to teacher morale.

Hypothesis 4: Teachers will change their teaching behavior more and will implement the inservice training program better in schools where the teachers perceive the principal to be supportive and where the policies are clear and consistently enforced. In these environments, fewer interruptions will occur in the classrooms and students will be off-task less often.

In this study, we defined implementation as the degree to which teachers were operating at the criterion levels that had been established in prior research (Stallings, et al., 1979). That is, after the inservice training, were the teachers implementing our program as intended?

Because of our awareness that some teachers would have to change more than others in order to reach the criterion level, we computed fall-to-winter change scores for teachers. Regardless of whether teachers reached criterion, it is of interest to know how much behavior change occurred after the training intervention.

The program implementation and behavior change results will be discussed first. Then, the findings on classroom intrusions will be presented.

Analysis

Fall, winter and spring implementation scores were generated for each observation variable for each teacher and school. Change in scores from fall to winter were generated for each school. Pearson Product Moment correlations were computed between fall and winter implementation, fall-to-winter change scores, principal variables, student off-task variables and classroom intrusions.

Implementation Variables

Implementation was studied through data obtained from the Secondary Observation Instrument. Estimates of the percent of time students and teachers spent in different activities were generated from the Snapshot (See Appendix C). The frequency of occurrence of specific teacher interactions and behaviors were estimated through an average of 900 interaction variables collected during three consecutive class periods. This provided a base of approximately 300 interactions per period. Each teacher was observed for three class periods in the fall, winter and spring. The operational definitions of the 23 observation variables can also be found in Appendix C.

The variables were organized so that the percent of observed time could be calculated in terms of interactive instruction, non-interactive instruction, organizing or making assignments, and off-task time. These were composites of more specific variables. The interaction variables reflected how frequently questions were asked, what teachers did with right answers, what teachers did with wrong answers, how teachers controlled behavior, and several other instructional strategies.

Based upon research findings described in Chapter 1, our inservice workshops aimed at having teachers increase their interactive instruction to 50% (plus or minus 5%) of the observed time and decrease the non-interactive time to 35% (or less). We also asked them to spend no more than 15% of their time on organizational or management tasks. These criterion figures were established by looking at effective teachers' performance levels in the past three secondary school studies conducted by the principle investigator. These figures were then viewed in terms of their face validity. Did they make sense? Were such distractions feasible? Local teachers and administrators as well as teachers and administrators in Alabama and Mississippi found them to be stringent but reasonable.

Implementation scores were created for each teacher on each variable. If a teacher was performing up to the criterion on a variable, she or he received a point on that variable; if she or he was not, no point was awarded. An average implementation score was then generated for each school by summing the total implementation scores for each teacher in a school and dividing by the number of teachers at that school. To examine the overall effectiveness of the training, fall, winter and spring average implementation scores were computed for all teachers.

There was an error in the processing of some of the fall observation variables and only 16 of the 23 variables were used for the fall implementation scores. Thus, in the fall, if a teacher implemented eight of the 16 variables at the criterion level, that teacher received an overall implementation score of 50%. The variables that were not used in the fall included: Teachers working alone, Students off-task, Teacher corrections, Teacher instruction, Positive and Negative interactions.

Principal and School Policy Variables

The process of ranking schools for clear and consistent policies was described at length under Hypothesis 1. Essentially, each of the eight schools was ranked from one to eight on specific dimensions of clarity and consistency of policies. The rankings have then been used in the correlations.

Several school policy and principal leadership variables were studied for relationships to teacher implementation and student behavior. They include: Policy Clarity and Consistency; Rule Governed Organization; Administrative Hindrance; Supportive Style; Respectful Style; and Directive Style. Items for these subscales are listed in Appendix B.

Classroom Intrusion Variables

The number of intrusions into classroom time was measured with the classroom observation instrument. Every time the loudspeaker came on, tardy students entered, or any other intrusion occurred, it was recorded on the coding form. A school intrusion score was computed by taking the average number of daily intrusions for all teachers in a school and dividing by the number of teachers.

Students On-Task Variables

The amount of student off-task behavior was measured in three ways. The first Off-Task variable was taken from the Snapshot Observation and indicates what percent of student time was spent off-task. The Behavior variable was coded on the Five Minute Interaction Observation and reflects how frequently a teacher corrected a student's behavior. The On-Task subscale of the student Classroom Environment Questionnaire measured students' perceptions of how on-task their classrooms were. The quanification of the On-Task variable was identical to the quanification of the pupil morale variables described in Hypothesis 2.

Implementation Results

Implementation was considered in terms of what percent of the variables were implemented at each school in the winter after the five workshops had been completed. The inservice program aimed at changing teachers' behavior, thus the amount of change that occurred was also of interest. Teachers started and ended the project with very different levels of performance. The percent of teacher change (winter minus fall) was computed for each school and was considered along with implementation.

The schools' fall, winter and spring implementation scores for each school are presented in Table 16. The schools started and ended at very different levels. School H, which started with the lowest score, made the most gain. The teachers at this school also maintained the gain through the spring.

Table 16
Percent of Implementation
and Percent of Change for Eight Schools

Schools	Fall	Winter	Spring	Fall-to-Winter Change
A	67%	74%	87%	7%
B	75	57	49	-18
C	50	87	39	37
D	50	74	74	24
E	56	49	61	-7
F	44	70	26	26
G	63	26	30	-37
H	28	78	78	50

Schools B and G started with higher implementation scores and had much lower scores in the winter. Teachers in both of these schools mentioned that their principals were rather unresponsive to their input and that they felt a lack of respect and support. In addition, teachers in Schools B and G were strongly advised to participate in our inservice program and they came somewhat reluctantly. School E had two teachers missing during winter observation, but they were present and observed in the spring. This may partially explain the drop in the winter implementation score for this school. School A started high and continued to improve throughout the spring. The principal in this school was new and gave our training program considerable support. Schools A, D, and H retained their skills in the spring. These three schools all had moderate to high scores on the principal supportiveness scale.

As mentioned on page 49, the fall implementation data was missing for seven of the 23 observation variables. Several of the variables missing were rather critical to implementation, e.g., instruction, guiding corrective feedback, and students on-task. Scattergrams revealed several outliers in the data that made the correlations for this fall data set uninterpretable.

School implementation scores and change scores were correlated with school policy, principal leadership style, intrusion, and student variables. Out of the 18 correlations in Table 17, four were found to be significant (see Appendix D for Scatterplots.

Table 17

Correlations Between Program Implementation, School Policy, Principal Leadership, and Student Variables

	Fall/Winter Behavior Change	Winter Implementation
School Policy		
Policy Clarity and Consistency	.66**	.01
Rule Governed Organization	.46	.32
Administrative Hindrance	.12	.18
Principal Leadership Style		
Supportive	.44	.60*
Respectful	.44	-.15
Directive	.03	.13
Intrusions	-.37	-.12
Student Task Behavior		
On-Task Fall	.21	.58*
On-Task Spring	.26	.71**

* $p < .10$ ** $p < .05$

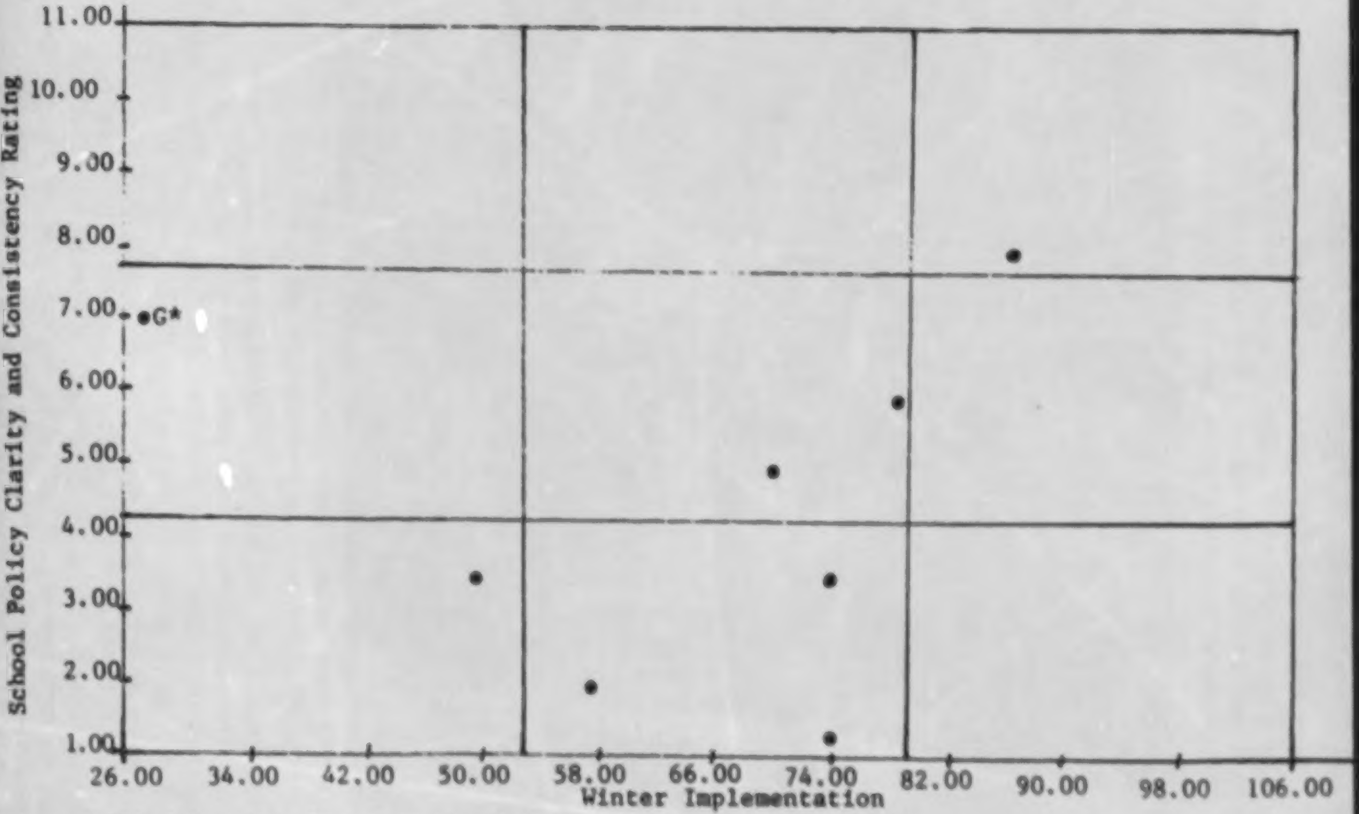
More change occurred in schools where the policies were clear and consistently enforced (r = .66). There was a moderate trend for teachers to change behavior in the recommended ways when they perceived that their principal was supportive and respectful of their judgement (r = .44). There was also an indication that more teacher change occurred in schools where there were fewer intrusions (r=-.37).

Winter program implementation tended to be greater in schools where the teachers perceived their principals as supportive (r = .60). Winter implementation was also related to students being on-task in the fall and in the spring. It is hard to know whether teachers could implement the program better when students were on-task more often or whether students were on-task more often when teachers were providing effective instruction.

It was surprising to find no correlation between Policy Clarity and Consistency and Winter Implementation. An examination of the scatterplot of these data revealed one outlier (See Figure 5). The school in the upper left hand margin had very clear and consistent policies, but their three math teachers were very bound to a curriculum that did not allow interactive instruction. The format was for students to work at their own pace in workbooks and take a test when a section was completed. The teachers answered questions and tested students. Total or small group instruction or review was not allowed. If this anomoly is removed, there is a good association between clear and consistent policy and winter implementation (r = .58).

The component of the hypothesis stating that teachers would change their behavior more in environments and where policies were clear and consistent was confirmed. The component relating change and a supportive principal was related but not confirmed at a statistically significant level. The component of the hypothesis regarding program implementation was only confirmed in part. When one anomaly was removed, programs were implemented more completely in schools where the policies were clear, consistent and well communicated. The supportiveness of principals was positively related to actually implementing the program in the winter.

Four schools had high change scores and high implementation scores. We attempted to find what the four schools had in common. They all started with rather low scores in the fall. The principals in these schools met with the teaching staff each month. The principals in these four schools were visibly supportive of our inservice training program. All four groups of teachers met after school and attended because they chose to do so. There were no other incentives.



r = -.009 (when N = 8); r = .58 (when School G is removed*)
Winter Implementation: $\overline{X}$ = 64.4; SD = 19.6
Clarity and Consistency: $\overline{X}$ = .45; SD = 2.4

Figure 5
SCATTER PLOT OF SCHOOL POLICY CLARITY AND CONSISTENCY
AND WINTER IMPLEMENTATION

Overall Effectiveness of the Training Program

To assess the overall effect of our training program, we computed the average implementation of each variable in the fall, winter and spring observations for all teachers in the study. Our primary intervention -- the five workshops -- was during November, after the fall observations. Therefore, the winter observation was used as the post-test to measure teacher change. Because of the many changes in the sample between winter and spring, the spring observation was considered as a measure of retention only. By spring, the number of teachers observed had changed from 33 to 28. Two schools had been selected for closing. Several teachers had been transferred and three had babies.

Fall. In the fall, teachers were implementing 10 out of 16 variables at an acceptable level (See Table 18). Thus, on the average, teachers were using 63% of the program practices acceptably before the training started. Note that seven variables excluded from the fall scores due to an error in the computer program. These seven variables were included in the winter and spring implementation scores.

Winter. In the winter, over the total sample, 20 out of 23 variables were implemented. This is very impressive behavior change, especially when one notes that only 10 out of 16 variables were implemented in the fall. However, three variables important to the model were not implemented. These were: time spent in interactive instruction, students off-task, and students reading aloud.

Central to the training model was helping teachers learn to spend 50% of their time on interactive instructional activities. Findings from previous studies indicate that teachers who provide instruction on a new lesson, ask questions about the new information, check for understanding, provide acknowledgement for acceptable answers (or guiding corrections for wrong answers) have students who attend class more regularly, stay more on-task, and make more academic gain.

We estimate that 50% of the available time should be used for interactive instruction. We have used two methods for assessing this variable. The first is the Snapshot, where the percent of the time spent in activities is estimated through five one-minute observations spaced equally across a class period. The first snapshot is taken a few seconds after the bell rings. At this time, the teacher is likely to be doing organizing or management activities. A few minutes later, the teacher may be providing active instruction, but the next snapshot will not be taken for 10 minutes. The instruction might actually occur for 25 minutes in a 50-minute period but only be recorded on two of the five Snapshots. This timing procedure might have underestimated the actual amount of time

Table 18

Overall Implementation of the Training Program

	FALL	CHK	WINTER	CHK	SPRING	CHK	CRITERION
USE OF TIME VARIABLES MEAN %							
Student time spent in interactive instruction	39.34		37.74		30.33		50 ± 5
Student time spent in non-interactive instruction	27.53	✓	32.36	✓	17.66	✓	35 or less
Teachers giving assignments or organizing	10.82	✓	13.75	✓	11.51	✓	15 or less (+1)
Teachers working alone	N/A		12.68	✓	15.27		12 or less (+1)
Students off-task	N/A		16.11		20.40		10 or less (+1)
INTERACTION VARIABLES MEAN FREQUENCIES							
Teachers speak to one student	96.02	✓	95.94	✓	95.72	✓	90 ± 20
Teachers speak to small group	11.29	✓	6.72	✓	6.29	✓	5 (+25)
Teachers speak to everyone	63.16		72.04	✓	67.89		90 ± 20
Teachers speak to different students	26.43	✓	25.43	✓	25.34	✓	20 or above
Students read aloud *	2.12		10.88		9.36		20 - 40%
Teachers ask questions	22.99	✓	24.69	✓	19.07		20 or more
Students respond	24.18	✓	27.52	✓	22.62	✓	20 or more
Teachers praise or support	12.68		15.00	✓	11.28		15 or more
Teachers correct	N/A		17.70	✓	14.19	✓	10 or more
Teachers guide and correct	N/A		8.88	✓	5.66	✓	5 or more
Teachers instruct	N/A		78.38	✓	68.95	✓	75 ± 20
All reading and task statements	192.76		222.37	✓	189.89		210 or more
All assignment statements	87.09		59.65	✓	86.05		50 ± 10
All social statements	3.16	✓	5.58	✓	8.63		6 or less
All behavior statements	8.04	✓	9.02	✓	10.00	✓	10 or less
All teachers working alone	23.44	✓	29.40	✓	26.54	✓	30 or less
All positive interactions	N/A		7.62	✓	6.29	✓	6 or more
All negative interactions	N/A		1.37	✓	.90	✓	2 or less
TOTAL IMPLEMENTATION	10/16		20/23		13/23		number implemented /out of # possible

CHECK column: ✓ = meets criterion
*Math classes will have no students reading aloud.
N/A indicates variables were not used in the fall.

teachers spent on interactive activities. It was on this variable that the teachers (on the average) did not reach criterion in the fall, winter or spring.

The second method of measuring the interactive nature of the instruction was through the Five-Minute Interaction codes. The interactive instruction codes that were unique (more than one cannot be coded in any one frame) are: students read aloud; teachers ask questions; students respond; teachers praise or support; teachers correct; and teachers instruct. The frequency of occurrence of these variables in the winter was summed to create a score for interactive instruction. The total sample average on this variable was 175 per period. The average total number of interactions or behavior that were recorded per period was 300. Thus, the second method of assessing the interactive nature of teacher instruction indicated that over 50% of the teacher's time was spend in interactive activities.

Students were off-task more than we recommended. This means they were either having social conversations or were simply not involved -- staring out the window, waiting, or asleep.

The Students Reading Aloud variable did not reach the specified criterion. This can be explained in part by the presence of seven math and six science teachers in this sample. These content area teachers could not be expected to have students read aloud very often. Thus, these teachers brought the total average down. When we looked only at those teachers who were teaching reading, the criterion level for this variable was met.

Spring. In the spring, only 13 of 23 variables continued to be implemented. Students were off-task more often, they spent less time in interactive instruction, and teachers worked alone more often. The spring observations were conducted in late April and early May. By this time of the year, students and teachers are likely to feel that school is out and they stop using their time effectively. But, there was great variation between schools in the spring data. The affected variables are explained in the next section.

Intrusion Results

Intrusions into classroom space were recorded on the observation instrument during the fall, winter and spring. Schools differed considerably on the number of intrusions that occurred in the classrooms we observed. School C, which ranked highest on Policy Clarity and Consistency, had the lowest number of interruptions in the fall. Their spring score was inflated due to an added five-minute announcement period on one observed day. The announcement should not have been counted as an intrusion since it did not use the alloted class time. Schools A and E, which ranked low on Policy Clarity, were high on intrusions in fall and spring. Table 19 indicates that teachers in all schools had fever interruptions in the fall than they did in the spring.

Table 19
Intrusion Scores for Eight Schools
(average daily intrusions)

Schools	Fall	Winter	Spring
A	4.1	5.9	8.2
B	1.9	1.7	8.7
C	1.3	2.7	14.6
D	2.1	3.5	3.0
E	4.6	7.4	6.9
F	3.7	2.3	8.3
G	1.9	3.3	11.6
H	2.3	4.0	3.8

Correlations were computed between the seasonal average daily intrusions, principal leadership styles, and school policies. Table 20 shows these correlations.

Table 20
Correlations Between Intrusions and School Variables
(N = 8)

	Fall Intrusions	Winter Intrusions
Policy Clarity and Consistency	-.58*	-.34
Rule Governed Organization	-.44	-.43
Supportive Style	-.37	-.17
Directive Style	.24	.47

* $p < .10$

There was only one significant correlation: between fall intrusions and school policies. In schools where policies were clearer and more consistently enforced, it was likely that fewer intrusions into the classroom time occurred ($r = -.58$). There are other trends in these data that suggest that at schools that were rule governed and collaborative in leadership style, there were fewer interruptions in the classroom. Thus, the component of the hypothesis regarding classroom interruptions and clear, consistent policies was confirmed.

The correlation between fall intrusions and winter intrusions was .83 ($p < .01$). This suggests that the intrusion factor was rather stable from fall to winter and that it may take considerable effort on the part of principals to reduce classroom interruptions.

Student Task Behavior Results

The hypothesis also predicted that students would be off-task less often in schools where the principal was supportive and where the policies and rules were clear and consistently enforced. Forty correlations were generated using these data: fall and spring student quesionnaires (on-task); fall and winter observations of student task behavior; fall and winter school policies; principal leadership style; and classroom intrusions. These correlations are shown in Table 21. The hypothesis was confirmed. Fifteen of the 40 correlations were significant ($p < .10$).

Table 21
Correlations of
Student Task Behavior and Principal Leadership Style
(N= 8)

	Behavior		Off-Task	On-Task	
	Fall	Winter	Winter	Fall	Spring
School Policies					
Clarity & Consistency	-.53*	-.19	.21	.17	.54*
Rule Governed	-.72**	-.53*	.24	.44	.77**
Hindrance	.52*	.49	-.24	.23	-.24
Principal Leadership Styles					
Supportive	-.43	-.62**	-.47	.29	.21
Respectful	-.73**	-.56*	.24	-.05	.30
Directive	.72**	.57*	-.49	-.12	-.26
Intrusions					
Fall	.73**	.32	.19	-.51*	-.20
Winter	.82***	.48	.41	-.64**	-.24

* $p < .10$ ** $p < .05$ *** $p < .01$

Teachers tended to make fewer behavior corrections in the fall and students tended to be off-task less in the spring in schools where the misbehavior, tardiness, and absence policies were clear and consistently enforced. A similar relationship was found in schools where teachers and students helped make rules and where rules were clearly communicated and enforced. In such rule governed schools, and in schools where the principals were seen as supportive to teachers, behavior corrections tended to be lower in the winter. Teachers made behavioral corrections more often in schools where the principal was perceived to be quite directive and where there was greater administrative hindrance.

Intrusions into classroom space varied considerably from school to school. In schools where there were frequent interruptions from the loudspeaker or from tardy students, there tended to be more teacher corrections for behavior ($r = .73$) and fewer students on-task ($r = -.51$). Thus, such intrusions into class time might make it more difficult for students to get their work done.

It seems clear that teacher and student classroom behavior is strongly related to school rules and policies and to certain principal leadership styles. We conclude that the component of the hypothesis regarding principal leadership styles, clear and consistent policies, and student task behavior was confirmed.

Given the strong and consistent positive relationship established between student on-task behavior and student achievement in past research (e.g., McDonald and Elias, 1976) the links between these student behaviors and school policy variables take on even more significance.

Hypothesis 5: Schools that have clear and consistently enforced policies will have less litter, fewer broken windows, and fewer students in the halls or on school grounds during class time.

Analysis

Correlations were computed between the ratings for School Policy Clarity and Consistency and school litter, graffiti and vandalism.

School Policy Variables

Each school was rated for clarity of policies and consistency of enforcement. The method used to develop the rankings was described in detail under Hypothesis 1.

School Physical Environment Variables

The Physical Environment Observation was used at each school in the fall and winter. This instrument yields ratings of how much litter and graffiti was seen on the school grounds, hallways, parking lots and bathrooms. The number of students out of class during class time was also recorded on the Physical Environment Observation. School scores on these variables were created by adding the fall and winter ratings together.

School vandalism was estimated from the amount of money spent to repair damage, e.g., broken windows, broken or stolen equipment. This figure was divided by the number of pupils in the school, resulting in an estimate of money spent on vandalism per pupil.

Litter and Graffiti Results

The possible scores for the litter variable ranged from 13 to 52, and the possible graffiti scores ranged from 8 to 32. The school litter and graffiti scores are presented in Table 22.

School A, which was the lowest on the rankings of Policy Clarity and Consistency, had the most litter in the halls and on the school grounds. School C, which had the clearest and most consistently enforced policies, had the least amount of litter. These two schools were similar in size and both had custodial services rather than student crews to clean up the school grounds during the week. However, School C also used Saturday detentions where students assisted the custodians in cleaning up the grounds and removing graffiti. School C also had very little graffiti visible in the halls, bathrooms and sidewalks. School G, which was low in the amount of litter and graffiti, had a policy of allowing students to be dismissed 30 minutes early on Friday if they kept the grounds and bathrooms clean. This type of motivation seemed to help.

Table 22
Physical Environment Observation Ratings
and Correlations with School Policy Clarity
(N = 8)

School	*Ranking on Policy Clarity and Consistency	Litter	Graffiti	Vandalism Costs	Students out of Class
A	1.0	33.0	10.0	$8.33	12.5
B	2.0	18.5	10.0	3.31	8.0
C	8.0	17.0	8.0	3.98	9.0
D	3.5	32.5	12.5	6.55	8.5
E	3.5	19.5	8.0	5.13	14.5
F	5.0	20.0	9.0	2.99	10.0
G	7.0	18.5	8.5	3.04	9.5
H	6.0	20.0	12.0	5.86	15.0
Correlations with: Policy Clarity and Consistency		−.62	−.30	−.60	−.08

* 1 is low; 8 is high on Clarity and Consistency ranking.

A correlation of -.62 was found between the amount of litter and our ranking of the schools on clarity of rules and consistency of enforcement. The correlation between graffiti and the school policy clarity ranking was -.30. While this was not significant, it was an indication that schools with clear and consistent policies may have had less graffiti. Such schools did tend to have less litter.

Vandalism Cost Results

Vandalism costs were calculated on a per-student basis. The correlation between School Vandalism Costs and Policy Clarity and Consistency was -.60. Clearly there seems to be a cost advantage to providing clear policies about acceptable behavior and sticking to the rules and penalties.

Students Out of Class Results

No correlation was found between the number of students in the hallways and the school ratings on clarity of policy and consistency of enforcement. The Students Out of Class score could range from 7 to 35. The number of students in the hallways and on the grounds during classes had to be considered in light of school schedules. Some schools had modular scheduling. This meant that some students were not scheduled to be in class during every period of the day. Several schools did not schedule all students for classes during first or sixth periods.

All of the principals interviewed regarded such scheduling as less than desirable. These scheduling policies were a result of budget cuts. To reduce costs, students were not required to take as many classes as they were in the past. In the 1960's and early 1970's, most high schools provided seven class periods for all students. Now many schools only require students to attend five periods per semester to graduate in four years. Elective courses are often offered only on a first-come, first-served basis.

In most cases, students were expected to use the unscheduled time in the library for study or for some extracurricular activity. They were not expected to loiter on campus or in the halls. Only School B had a policy where it was all right to be on campus or in the halls during class time--but only if students did not disturb those in class. This school had one of the lower rates of students out of class. The Out-of-class hypothesis was not appropriate; that is, it really couldn't be examined because of recent changes in budget and policy.

The hypothesis regarding less litter and vandalism in schools with more clear and consistently enforced policies was confirmed. The component regarding fewer students in the hallways where policy was clear and consistent was not confirmed.

In summary, it appears that less student vandalism occurred and there was a more pleasant physical environment in schools where there was a clear statement of policies, rules and expectations and consistent enforcement of them.

Other Analyses and Results of Interest

Student Attitudes

Using t-tests, the results on the student questionnaires were examined for differences between 285 women and 348 men, between 178 high and 438 low achieving students, and several ethnic groups. The tables of means and standard deviations are presented in Tables 23 and 24.

Differences by Sex. Of 24 subscales, five were responded to differently by men and women. Men experienced more competition than women. Women felt the assignments were of greater use than did men. Women took more responsibility for their own success than did men ($p < .08$) and women felt more commitment to the school and experienced more school justice. In general, women seemed to have more positive attitudes toward school than did men. These findings, though statistically significant, should be interpreted with caution since the actual differences between groups are small.

Differences by Achievement Groups. Out of the 24 subscales, high and low achieving students were different on 17 of them. The higher achieving pupils rated themselves to be more involved, more task-orientated and more generally committed to the school than did the low achieving students. They also rated the teachers as being clearer, more committed, and more professional than did the low achieving students. They found the school to be more attractive, friendly, and experienced more school justice than did low achieving students. Strangely, they did not feel more self-confidence. However, this subscale had low reliability and thus little confidence should be placed in this finding. Lower achieving students experienced more feelings that their school was in jeopardy (about to close). The low achieving student definitly felt less a part of the school and consequently were potential drop outs. These findings strongly suggest that schools should make concerted efforts to help low-achieving students experience success in the classroom and the school.

Differences by Ethnicity Groups. Five ethnic groups were identified. The "other" category included the Native American and Portuguese students. The results of this analysis are presented on Table 24. Overall, the Asian students rated their teachers and schools higher than did the other groups of students. In two of the schools in which most of the Asian students were enrolled, the students were recent immigrants and felt very pleased to be in this country and in those schools. They reported being more involved in the school work and receiving teacher support. They found the classwork more difficult and the competition

Table 23
Differences in Student Ratings of the School and Teachers, by Sex and Achievement Level

	WOMEN (N=285)		MEN (N=346)			LOW ACHIEVING (N=438)		HIGH ACHIEVING (N=178)		
VARIABLE NAME	$\overline{X}$	SD	$\overline{X}$	SD	p	$\overline{X}$	SD	$\overline{X}$	SD	p
Involvement	.40	.32	.37	.31		.35	.31	.44	.31	***
Affiliation	.68	.31	.64	.31		.64	.32	.70	.29	
Teacher Support	.62	.33	.61	.34		.60	.35	.63	.32	
Task Orientation	.75	.26	.75	.26		.73	.27	.82	.23	****
Competition	.39	.28	.44	.29	*	.39	.29	.47	.28	***
Order and Organization	.38	.34	.38	.33		.34	.32	.48	.34	****
Rule Clarity	.65	.33	.63	.31		.63	.33	.67	.30	
Teacher Control	.53	.33	.49	.33		.50	.33	.56	.33	**
Innovation	.48	.32	.51	.31		.47	.31	.55	.30	***
Teacher Professional	.77	.35	.75	.35		.75	.35	.77	.33	
Teacher Clarity	.71	.33	.69	.34		.68	.34	.73	.31	*
Assignments - Utility	.76	.29	.72	.31	*	.72	.30	.77	.29	*
Teacher Commitment	.75	.30	.74	.32		.73	.32	.77	.28	*
Student Reason for Success	.75	.22	.72	.25	*	.72	.24	.76	.24	**
School Justice	.62	.29	.56	.32	****	.56	.32	.64	.29	****
School Jeopardy	.45	.34	.47	.35		.48	.35	.43	.34	*
School Attractiveness	.56	.34	.56	.32		.54	.33	.60	.32	**
Student Enthusiasm	.54	.32	.52	.31		.54	.32	.52	.30	
Student Self-Confidence	.41	.34	.44	.33		.43	.34	.43	.33	
Attractiveness/Teacher & Class	.62	.36	.60	.36		.60	.37	.63	.34	
Friendliness	.88	.22	.87	.24		.86	.24	.91	.18	****
Difficulty of Classwork	.52	.48	.48	.43		.38	.41	.74	.39	****
Student Engagement in Work	.35	.31	.36	.31		.30	.28	.48	.33	****
Student Commitment	2.63	.64	2.35	.76	****	2.39	.73	2.65	.66	****

* $p < .10$ ** $p < .05$ *** $p < .01$ **** $p < .001$

Table 24
Differences in Ratings of Schools and Classrooms by Several Ethnic Groups of Students

	ETHNICITY												
	BLACK (N=62)		WHITE (N=373)		MEXICAN (N=79)		OTHER (N=19)		ASIAN (N=64)		SAMOAN-P (N=43)		signif % of f
VARIABLE NAME	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	
Involvement	.33*	.30	.34*	.30	.42	.34	.46	.35	.52*	.30	.36	.33	****
Affiliation	.72	.28	.64	.33	.67	.26	.65	.37	.67	.29	.75	.30	
Teacher Support	.55*	.29	.58*	.34	.67	.33	.52*	.41	.78*	.25	.60	.35	****
Task Orientation	.75	.24	.74	.27	.77	.23	.75	.27	.80	.23	.80	.25	
Competition	.44	.28	.37*	.29	.36*	.27	.40	.30	.58*	.26	.49	.29	****
Order and Organization	.29*	.29	.35*	.33	.42	.34	.49	.34	.49*	.32	.37	.33	***
Rule Clarity	.57*	.32	.60*	.33	.69	.30	.83*	.19	.74*	.30	.67	.28	****
Teacher Control	.51	.34	.47*	.33	.54	.33	.61	.37	.65*	.28	.56	.34	***
Innovation	.52	.32	.47*	.32	.51	.30	.40*	.39	.60*	.31	.55	.25	**
Teacher Professional	.77*	.30	.79*	.36	.78*	.30	.78	.35	.69	.32	.56*	.38	***
Teacher Clarity	.66*	.33	.67	.36	.79	.25	.79*	.27	.72	.29	.68	.35	*
Assignment - Utility	.67	.33	.74	.31	.78	.24	.77	.31	.77	.22	.68	.34	
Teacher Commitment	.73	.31	.73	.34	.78	.25	.82	.28	.78	.24	.75	.31	
Student Reasons for Success	.80	.19	.72	.24	.74	.24	.80	.21	.76	.23	.76	.25	
School Justice	.62	.30	.58	.31	.60	.30	.64	.33	.66*	.26	.46*	.30	**
School Jeopardy	.45*	.37	.42*	.34	.46*	.34	.63	.33	.53	.33	.69*	.31	****
School Attractiveness	.57	.31	.54*	.33	.58	.32	.77*	.35	.63	.26	.54	.35	**
Student Enthusiasm	.62*	.27	.47*	.31	.55	.30	.62	.34	.69*	.28	.61	.34	****
Student Self-Confidence	.58*	.34	.40	.32	.38*	.36	.57	.38	.43	.32	.39	.33	***
Attractiveness/Teacher & Class	.58	.35	.58	.37	.67	.34	.69	.37	.71*	.31	.56*	.39	**
Friendliness	.90*	.17	.89*	.22	.85	.27	.84	.25	.80*	.27	.86	.23	**
Difficulty of Classwork	.52	.43	.51	.45	.39*	.42	.42	.45	.61*	.39	.58	.45	**
Student Engagement in Work	.28	.28	.37	.33	.33	.30	.44*	.32	.39	.31	.26*	.23	*
Student Commitment	2.67*	.76	2.35*	.71	2.46	.70	2.83	.80	2.73*	.69	2.86*	.56	****

* $p < .10$ ** $p < .05$ *** $p < .01$ **** $p < .001$

greater than did other students. They rated their teachers higher on order, organization, clarity, control and innovation than did other students. They felt the teacher and class to be more attractive and the school rule system to be more just than did other students.

Black students and white felt their schools to be more friendly and rated their teachers higher on a professional scale than did other students. Black students expressed the most self-confidence, whereas Mexican and White students expressed the least amount of self-confidence. Again, the self-confidence subscale's low reliability should make us cautious in interpreting this finding.

The Samoan students felt more school jeopardy and more school committment. These attitudes were most likely influenced by the planned closing of their schools. On the school-by-school examination of the student questionnaire, we found that students in the two schools that were ordered closed for next year were the most committed to their schools and teachers.

White students felt their schools to be the least attractive, they were the least committed, involved or enthusiastic. The white population was the largest group and was primarily a low achieving group. As shown in the previous section, low achieving students were not very pleased with themselves or their schools. Thus, it seems that white, low achieving students were often even more demoralized than other low achieving ethnic groups.

Student Misbehavior and Teacher Morale

In classrooms where more misbehavior occurred, teachers reported lower morale ($r = -.77$). They also reported being less engaged in their work ($r = -.71$) and had fewer close relationships with their colleagues ($r = -.70$). It is not clear whether teachers' low morale and disengagement contributed to student misbehavior or whether student misbehavior contributed to teachers' low morale. What is clear is that the cycle should be broken by the teacher. Student on-task behavior is related to teachers using time effectively in the classroom. These effective strategies can be learned and implemented in classrooms. Everyone loses when student misbehavior occurs.

School and Teacher Clarity Regarding Rules and Enforcement

Students who rated their teachers as having clear, well enforced classroom rules were most likely to be in schools that had clear and well enforced school rules ($r = .65$). The items on the Teacher Rule Clarity Subscale are listed in Appendix B. In these schools, there was less student misbehavior and teachers' morale was higher. While individual teachers within schools can be clear about their own rules, it is by far more effective to have a consistent school policy supported by the principal and teachers. In the latter situation, teachers spend less time disciplining students, more time instructing, and teacher and student morale is higher.

Teacher Acceptance of Responsibility for Student Failure

Teachers were less willing to take responsibility for student failure in classrooms where there were more intrusions (*r* = -.64). This is understandable; teachers could rightly feel that all their best efforts to teach were for naught if there were many interruptions during class time. Teachers also felt less willing to take responsibility for student failure in classrooms where the students evidenced more misbehavior (*r* = -.53). This could be a rationalization on the teacher's part. Earlier in this chapter, data were presented indicating that less student misbehavior occurs in classrooms where the teachers are effectively using their time, e.g., providing interactive instruction, providing positive support and providing several activities during the class period. Where there is more student misbehavior, it may be that teachers are not providing the type of appropriate instruction that will keep them involved and on-task.

Student Morale

Significant correlations were found between student off-task behavior and pupil morale. Student enthusiasm for school work, commitment to school, and ratings of school justice were all lower in schools where students were off-task more often (*r* = -.69, *r* = -.64 and *r* = -.59, respectively). Where students liked their schools more (School Attractiveness), they were on-task more often (*r* = .80).

Student Absence

Student absence was higher in schools where more classroom intrusions were observed (*r* = .85) and where pupil misbehavior was more frequent (*r* = .88). These results seem to suggest that where intrusions are kept to a minimum, classroom behavior and school attendance are better. Clearly, frequent interruptions during class time disrupt the flow of instruction. For low achieving students, these disruptions probably make learning even more difficult and frustrating. It is no surprise that such students would avoid school.

Staff Meetings

The number of staff meetings was related to teacher morale in Hypothesis 3. This variable was an indication of the frequency of formal communication between the principal and teachers. Interestingly, there were strong relationships between the number of meetings and these student outcomes: misbehavior (_r_ = -.87), on-task behavior (_r_ = .60) and absence (_r_ = -.75). It seems that where teachers and administrators communicate more often, students are more well-behaved and attendance is better. Perhaps more frequent meetings between principals and teachers afford more opportunities for discussing and developing consistent policy for student behavior and attendance. In previous sections of this chapter, students were reported to have less misbehavior in classrooms and schools that had clear and consistently enforced rules.

Principals' Problems

During their semi-structured interview, principals were asked what they considered to be their major problem. Two responded that they had lost the counselors in their schools due to their school districts' limited budgets. The administrative staff in both schools were required to schedule students for classes and department chairpersons provided more curricular advice to students. The time demands for the administrators were extraordinary. They reported spending ten to twelve hours on the school premises per day. This did not include all the extracurricular events.

Three principals mentioned student absenteeism as being the most difficult and almost insoluble problem they were encountering. Students can't be taught if they don't come to school. Student absenteeism contributes to lower school test scores and reduces school budgets since budgets are based upon the student daily average attendance.

Two schools mentioned school reorganization as being a major problem. One school had just merged two high schools' student bodies and teaching staffs. During the previous spring, this school had prepared the students to work collaboratively. Activities combining the two student bodies included a weekend retreat for the student leaders, a spring football practice, and a summer week of choir and band practice. The students chose the mascot from one school and the color from the other school. Even with all of this planning, it still required great effort from the administrative staff to combine school records, organize responsibilities, and develop good communication between the staff, the students, and the parents.

Three principals raised the issue of collective bargaining. They felt the process itself required a lot of time and they felt contractual agreements limited their flexibility in solving problems. One school principal who had a large percentage of two-parent, working families developed a plan with the school counselors to schedule meetings with parents on Wednesday evenings from 7:00 to 9:00 p.m. The counselors taking part would receive two hours leave on Friday afternoons. This proposal would allow parents, who otherwise would not be able to, to attend conferences regarding their children. Another advantage was that it did not cost the schools extra dollars. Unfortunately, the teachers' contract would not allow the counselors to work in the evenings without receiving extra compensation, and there was no extra money available.

When principals were asked where they received assistance in solving problems, there were several responses. Three said from their administrative staff and department heads, two others said from their administrative and teaching staffs. Two said from the central district where principals had bi-monthly meetings. One principal said, "Nowhere. This is the loneliest job in the world. I have to make the decisions and manage the school staff, and there is little assistance from the district. The union protects the teachers, but there is no one to go to bat for the principals. Fifteen years ago, principals and teachers were on the same side of the table working to make school better. Now there are good guys and bad guys and it is hard being seen as the bad guy."

This last poignant statement provides [illegible] insight to the plight of some principals. There are some things this administrator might do to increase collaboration with his staff so that the burden of solving problems could be carried by more shoulders. This principal was rated as being very directive by the staff. The staff felt this was a top-down organized school and they were expected to carry out orders. Apparently, this system doesn't feel any better to the principal than it does to the teachers.

Chapter V

SUMMARY AND CONCLUSIONS

This study of eight secondary schools was designed to examine the links between school policy and leadership style and teachers' and students' attitudes and classroom behavior. The study grew naturally from research in the 1970's on effective classroom teaching. The major findings of that research centered about the use of time by teachers and students. The next logical step was to teach the effective strategies identified to classroom teachers (Stallings, Needels and Stayrook, 1979). It was while training teachers to use their time effectively that the principal author learned of school policies and principal leadership styles that facilitated or inhibited teachers' efforts to implement the inservice program in their classrooms. Teachers reported frequent interruptions during the class period that stopped the instructional process. These included messages on the loudspeaker, tardy students, and students leaving class for special programs or extracurricular activities. Some teachers reported very high rates of absenteeism as well as tardiness. As teachers reported these events, it appeared that such interruptions and absences were much more frequent in some schools than in others. It appeared that some schools were quite clear in their policies about student behavior and consistently enforced those policies; other schools were not so clear or consistent. It was reassuring to find that teacher reports, student reports and observer reports of schools and classrooms were quite similar.

Hypotheses

At this point, we requested that the National Institute of Education fund a study to examine the relationship between school policies, teachers' behavior and students' behavior. The hypotheses that guided the study are listed below:

- Students and teachers will have lower absence rates in schools where the policies and rules are clear and consistently administered.
- Teacher and student morale will be higher in schools where the principal leadership style is supportive.
- Teacher morale will be higher where staff meetings are frequent and are rated as productive and interactive.
- Teachers will change their teaching behavior more and will implement the inservice training program better in schools where the teachers perceive the principal to be supportive and where the policies are clear and consistently enforced. In these environments, fewer inter-

ruptions will occur in the classrooms and students will be off-task less often.

- Schools that have clear and consistently enforced policies will have less litter, fewer broken windows, and fewer students in the halls or on school grounds during class time.

Sample

The sample included two upper income schools, four moderate income schools and two low income schools. The 602 students in our sample included 61 blacks, 81 Mexican descent, 69 Asian descent, 44 Samoan, 9 Philippine, 9 Portuguese, and 329 whites. 438 of the students were in classes defined as remedial. 178 were higher achieving students. The 43 teachers studied taught in the following subject areas: Mathematics, Science, English, Social Studies, Special Education, Reading, and English as a Second Language.

Data Set and Analyses

The data set included observations of teachers and students, 18 teacher questionnaire subscales, 16 student questionnaire subscales, absence records, physical environment observations, and principal interviews. Descriptive statistics, scatterplots, Pearson Product Moment correlations, and rank order correlations were used to examine the relationships between the several sets of data. All analyses were conducted at the school level. This provided a sample of eight and meant that correlations had to be quite high to be significant: $.51 = \underline{p} < .10$; $.63 = \underline{p} < .05$; $.79 = \underline{p} < .01$.

Results and Discussion of Hypotheses

Hypothesis 1. The first hypothesis regarding clear and consistent policies and student and teacher absence rates was confirmed in part. Students were absent less often in the fall in schools where the policies were collaboratively developed, clear, and well-communicated, and consistently enforced. This finding agrees with Reynolds' work (1976) which found that enforcement of formal rules and internal school organizations were significantly correlated with good attendance. Rutter's (1979) findings on attendance, however, were not so clear cut. He concluded the differences between schools on attendance rates may have been associated with factors not addressed by their study.

The available teacher absence data did not suggest a relationship between school policies and teacher attendance. Our hunch is that if teacher illness, personal leave and release time could be examined separately, then interesting relationships would be found between type of absence, teacher morale, and school policies.

Hypothesis 2. The second hypothesis stated that teacher and student morale would be higher in schools where the principals' leadership style was supportive. Although there was a positive trend in the data, teacher and student morale were not significantly related to the principal being supportive. But, teacher morale was significantly related to the principal being (1) respectful, (2) collaborative in making rules, (3) providing clear, consistent, well-communicated policy, and (4) providing necessary instructional materials and support services. Student morale was also higher in schools with these types of principals and policies.

Other researchers have not studied teacher and student morale so directly related to school policy. Little (1981) reported a relationship between esprit de corps and effective staff development. The staff development activities seemed to be more effective where there were opportunities for shared learning experiences. Rutter (1979) and Williams (1980) reported that principal's respect for teacher input in school decisions and the provision of adequate support services contributed significantly to well-functioning schools where staff and students were more satisfied and performed more effectively.

Hypothesis 3. The third hypothesis predicted that teacher morale would be higher and staff meetings would be more productive if meetings were frequent and interactive. Several components of this hypothesis were confirmed. Morale was higher when the meetings with the principal were more frequent, interactive, and productive. There was a trend for meetings to be rated as more productive when they were interactive and more frequent, but the relationships were not significant.

Meetings did relate significantly to several student behaviors. In schools where the principal met with teachers more frequently, students misbehaved less, were on-task more often, and absence rates were lower. It appears that more frequent interactive staff meetings (the range was zero to nine per year), the better the communication about policies and expectations for students, and the better student behaviors were.

These results are supported by a related finding. In reviewing studies of implementation of educational programs, Berman and Pauly (1975) reported that regular and frequent staff meetings were an important determinant of change. Berman and McLaughlin (1976) later reported that teacher morale also related to implementation. Thus, teacher improvement seems to be facilitated by high morale and frequent intra-staff communication.

Hypothesis 4. The fourth hypothesis predicted that teacher behavior change and the implementation of the Effective Use of Time Training program would occur to a greater degree in schools where the principals were supportive and the policies were clear and consistently enforced. The component of the hypothesis relating teacher change to supportive principals was not confirmed. But, teacher change was related to clear and consistent policies. When the training intervention started, teachers were performing the instructional variables to very different degrees. Most of the teachers were performing at the criterion level on some aspects of the program; but all teachers needed to improve on some variables. More improvement and fewer intrusions into class time were in evidence where the principals provided clear, consistent policies. Perhaps this type of overall school structure and stability allowed or encouraged teachers to try some new approaches in their classrooms.

Actual winter implementation of the Effective Use of Time inservice program did occur to a greater degree in schools where the principal was supportive and where rules were clear and enforced. In several schools, not as much teacher change was required to implement the training program. This implies that these teachers were doing several of the effective use of time variables at the criterion level when the study began. Further, where the principals were supportive, the students' classroom behavior tended to be better.

Teacher improvement in use of classroom time is as important as reaching the program implementation criteria. These two variables are not independent. In fact, five schools had impressive change in teacher behavior and good implementation scores. The only reasonable conclusion to make is to suggest that principals provide clear and consistent policies and be supportive to teachers if they wish to maximize the effect of inservice training.

A most important finding regarding program implementation is that students were found to be on-task more often, off-task less often, and needed fewer behavior corrections in classrooms where the Effective Use of Time Program was being implemented more completely. These three student outcome variables were obtained from three separate measures (Fisher, 1978): one student questionnaire and two different observation systems, lending credence to the validity of these variables. Given the signigicant relationships found between student on-task behavior and student achievement, these findings would encourage teacher educators, principals, and teachers to consider very seriously how time is used in the classroom.

These relationships between implementation, change, rule clarity, and principal supportiveness are not surprising. Most literature on teacher training and change suggests that teachers need to be supported in their efforts to improve (e.g., Naumann-Etienne, 1974). But, the importance of clear, consistent, well-communicated, collaborative overall school policies may have been underestimated. Some authors (e.g., Williams, 1980) may consider such clear school policies as a source of support.

The finding that students spent more time on-task in classrooms where teachers implemented the Effective Use of Time Training to a greater degree supports earlier teaching effectiveness findings (Brophy, 1979). The inservice training program was based on several years of correlational and experimental research suggesting that effective teachers maximize interactive learning time, and minimize time spent on misbehavior and other non-academic topics (Stallings, et al., 1979). The research reported here indicates that where schools provide adequate support, teachers will implement the Effective Use of Time Training, and pupils will spend more time on-task.

Effectiveness of the Training. Over the total sample of 33 teachers who completed the training program, we found that 20 out of 23 variables were being satisfactorily implemented in the winter. For teacher trainers, it is important to learn how to bring about implementation of inservice programs. Each time we train teachers, it is an opportunity to learn how to imporve the training. The three variables (time spent on interactive instruction, students off-task and students reading aloud) not implemented suggest that we should perhaps provide some demonstration/modeling or coaching. Perhaps our observation instruments should be processed more quickly and be simplified so that teachers can receive specific feedback more often. In any event, our pre-test/guided practice/post-test model of inservice did produce implementation of 90% of the program. Further, implementation was significantly related to student on-task behavior.

Hypothesis 5. The fifth hypothesis predicted that schools with clear and consistent policies would have less litter and vandalism and fewer students out of class. The presence of students in the halls and on the grounds during class time was not related to school rule clarity and consistency. Rather, the number of students out of class was related to the schools' scheduling policies. Because of budget constraints, most schools only required students to register for five of the six or seven class periods. This meant that students were allowed on campus during their one or two free periods.

However, the part of the hypothesis regarding litter and vandalism was upheld. Indeed, schools were physically more pleasant -- with less graffiti, litter, and vandalism -- where the policy regarding student behavior was clear and consistently enforced. This finding can be linked to Rutter's (1979) finding that schools receiving high ratings on "pleasant and confortable" environment had students with higher exam success and better behavior. Given our finding that clear, consistent policies related to clean, pleasant physical environments and better pupil behavior, we begin to form a clearer picture of the effective secondary school: clear, enforced rules; pleasant, clean grounds; less vandalism; acceptable pupil achievement and behavior.

Summary of Findings

Many correlations were computed between student behaviors, teacher attitudes, school policy, and principal leadership styles. Table 25 indicates the significant positive and negative correlations found in this study. Essentially, these findings can be summarized as follows:

Clarity and Enforcement of Policies

In schools where policies regarding student tardiness, absences, and delinquency were made collaboratively, and were clear, well-communicated and consistently enforced, the following* was true:

- Teacher morale was higher.
- Teachers implemented our training program to a greater degree.
- Teachers were more committed to do a good job teaching.
- Teachers were more clear and consistent in applying behavior rules in the classroom (their discipline was better).
- Students perceived more friendliness.
- Students were on-task more often.
- Students misbehaved less often.
- Students were absent less often.
- There was less litter and vandalism in the school.

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*NOTE: These policy findings come from two sources. The Policy Clarity and Consistency Ranking was established by the authors. It correlated .77 with Rule Governed Organization which was a teacher rating. The constructs measured by each were similar and they serve as a cross validation of each other.

Table 25
Significant Correlations Between Variables In a Study of Eight Secondary Schools

* p < .10
** p < .05
*** p < .01

	TEACHER								PUPIL							
	TEACHING BEHAVIOR			TEACHER ATTITUDES					BEHAVIOR				MORALE			
	Implementation	Behavior Change	Teacher Rule Clarity/Enforcement	Esprit	Commitment	Intimacy	Disengagement	Responsibility for Failure	Absence	Misbehavior	Off-Task	On-Task	Friendliness	Justice	Vandalism	Litter
SCHOOL POLICY																
Clarity/Consistency	*	**	**	*					-**	-*		*			-*	-*
Rule Governed			*	***	**				-***	-**		**	**			
Hindrance				-***	-**					*			-**		**	**
Intrusions							*	-**	***	**		-*			*	
LEADERSHIP STYLE																
Supportive	*							**		-*						
Respectful			**	***	**	***	-**		-**	-**			**	*	-*	-***
Directive				-***	-**	-**	**		*	**			-**		*	*
NUMBER OF MEETINGS	*			*					-**	-***		*				
PUPIL ABSENCE				-**	-**	-*	*		1.0	***			-**		**	*
PUPIL BEHAVIOR																
Misbehavior				-**		-**	**	-*	***	1.0				-**	**	*
Off-Task	-*										1.0					
On-Task	**		*									1.0				
PUPIL MORALE																
Friendliness				**	***	*		**	-**				1.0			
Justice					*					-**				1.0		-**
VANDALISM				-*			*		**	**					1.0	***
LITTER				-*		-*			*	*				-**	***	1.0

The findings suggest that principals should provide opportunities for teachers and students to help make the rules and penalties for student behavior. Further, the rules, expectations, and penalties that are established should be clear and communicated to all staff, students and parents on a continuing basis. People may forget unless reminded. Finally, rewards and punishments should be consistently applied. Two very effective schools posted the rules and penalties in each classroom. The school had a consistently applied detention policy that was used after contact with the parents. In the fall of the year, the school newspaper printed school rules and expectations for keeping the campus clean. If litter became a problem, the student newspaper would run an article reminding students to keep the campus clean. As an added incentive, students were dismissed 30 minutes early on Friday if a clean and orderly campus had been maintained during the week.

In contrast, the teachers of another school did not know the rules for tardiness or cuts. Each of the six teachers in our study reported making their own rules for acceptable behavior and decided and carried out the penalties. In several schools, rules were published in a student handbook that freshmen received, but rules were not modified or discussed by the staff or students. The rules had been made years ago. In one extreme case, none of the six teachers knew whether students were permitted to leave class if the teacher was ten or more minutes late. None of the teachers had a rule book and they could not locate one in the library. A week later, they obtained one from a freshman counselor and found there was no such rule that allowed students to leave class if the teacher was late.

Administrative Support Services

In schools where teachers perceived more administrative hindrance, their morale was lower and there was more student misbehavior. Hindrance was reported in schools where the following conditions existed to a greater degree:

- School supplies and extra books were not easily available for use in the classroom.
- Where student progress reports required a great deal of record keeping and not enough time was available. (Teachers were torn between teaching and keeping records.)
- Where instructions or assistance for operating mechanical teaching aids were not available.
- Where custodial service was not available when needed.
- Where teachers had too many committee requirements.

- Where extra routine duties interfered with the job of teaching.

These findings suggest that principals should organize resources and personnel to facilitate the job of teaching. It may be that a discussion with the teaching staff about needs and available resources would result in a more satisfactory distribution of these resources. At any rate, teachers seemed to appreciate collaborative decision making. Their morale was higher when they felt less burdened. Importantly, students' classroom behavior was better in classes where teacher morale was higher.

Classroom Interruptions

In schools where there were more interruptions during the class period, there were fewer students on-task, more corrections for student misbehavior, and higher absence rates. The teacher took less responsibility for student failure and reported being less engaged in the act of teaching. The number of intrusions in classrooms is definitely a school factor. The average number of intrusions in the schools studied ranged from one to five per class period in the fall. The school with five intrusions per period had no clear school rules about tardiness. In this school, most of the interruptions were caused by tardy students. The school with only one interruption had a very clear and consistently enforced policy about tardiness. Another school which had a very high rate of interruptions in the spring (12 per class period) had abandoned staff meetings and provided school information on the loudspeaker.

It is logical that students and teachers will perform better in environments free from interruptions. Designing and executing a good lesson that will keep students on-task requires considerable effort on the teacher's part. Principals show respect for conscientious teachers when they enable them to conduct their well-prepared lessons without interruptions. Principals who support effective use of class time will reduce to a minimum those events that interfere with good instruction.

Principal Leadership Styles

Although there are many components of principal leadership style, only three have been examined in this study. The data were derived from teacher reports of principal behavior. The questionnaire subscales used were Supportive, Respectful, and Directive.

The supportive principals were described as ones who would:

- Go out of their ways to help teachers solve problems.
- Set an example by arriving early and working hard.

- Look out for the personal welfare of teachers, e.g., do personal favors, stay after school to help with extra work, provide necessary services.
- Use constructive criticism to help teachers do a better job.
- Share new ideas with teachers.
- Be well-prepared when speaking at school functions.

Principals who were rated as being more supportive had teachers who made more fall-to-winter change in the recommended Effective Use of Time Training program. Teachers with supportive principals took more responsibility for their students' failure and their students evidenced less misbehavior.

Principals who were rated as being respectful were those who respected teachers' judgement and integrity. These principals had teachers who had higher morale, were more involved in their work, and experienced closer friendships with their colleagues. Students in schools of respectful principals reported more fairness in how punishments and rewards were given, found their classrooms to be more pleasant and friendly, and exhibited less misbehavior.

Examples of directive principals are:

- One who made most of the decisions and then told the teachers about the decisions.
- The principal made all class scheduling decisions.
- The principal scheduled the work for teachers.
- The principal corrected teachers' mistakes overtly.
- Rules set by the principal were not questioned.
- Faculty meetings were principal report meetings.
- Staff had little or no input to meeting agendas.

The more directive principals had teachers with lower morale, who were less engaged in their work and reported having fewer close associations with their colleagues. Students in schools with directive principals exhibited more misbehavior and reported their classes to be less friendly.

In order to have students who are on-task and functioning well, we need to have teachers whose morale is high and who are engaged in their work. To have such teachers, principals need to establish policies collaboratively. These policies must be clear, consistent and well-communicated. Further, principals need to be supportive and respectful in their leadership style and provide easy access to the resources and materials teachers need.

Recent reports of Japanese industry credit a collaborative and supportive management style with their great success in producing fine automobiles. By contrast, our top-down directive automotive industry has not resulted in such esprit de corps or pride in the product.

With education, it also seems that the directive administrators who solve all the problems themselves and then tells the department heads, who then tell the teachers; will have teachers who are less engaged and less enthusiastic in their work. What's more, the students in such a school will evidence more misbehavior and have lower school morale.

Financial Implications

Two findings emerged from this study that have cost implications: (1) Student attendance rates were significantly better in schools where the principal provided a clear, consistent, collaboratively developed policy regarding student absence, cuts, and tardiness. It was also important that these policies were well-communicated to parents, students and teachers. (2) In schools with such policies, fewer dollars were spent on vandalism.

The primary source of school income is the average daily attendance of students. A source of cash outflow is school repair for vandalism. During a time of shrinking school budgets, these findings regarding school policy, student absence and vandalism have important implications for school administration.

A Comparison of Schools

Affluent Schools. Two of the eight schools (called X and Y here for clarity) were from quite affluent areas. Each school had a high proportion of their students operating in the 90th percentile on the California Assessment Program. They each had approximately 2,000 students and the ethnic population at both schools was primarily white. The student turnover rate at both schools was only 10%. The similarities stopped there.

School X was ranked highest on providing a clear and consistent policy; school Y was low on this ranking. The principal in school X was rated by teachers as being more supportive and using a team approach more often than the principal in school Y. The students in school X perceived more school justice and reported being on-task more often. Students were more committed and enthusiastic, and absent less often than were the students in school Y. School X spent $3.98 per student for vandalism while school Y spent $5.13 per student.

In school X, the principal met with the teaching staff at least once a month in small group meetings. In school Y, there was only one staff meeting a year. These teachers met only with department heads as needed. School X averaged one interruption during class time compared with an average of five interruptions in school Y. School X was implementing 87% of the Effective Use of Time practices in the winter, compared to 49% in school Y.

If only school percentile ranks on test scores are used to evaluate a school's effectiveness, school Y appears effective. Both schools X and Y had low achieving students but these students were not making healthy gains in school Y. The low achieving students in school Y reported feeling the least amount of enthusiasm, commitment and friendliness of all the students in the study. They also reported being on-task less often than students in all other schools. It appears the teachers in school Y were well-prepared to teach the many bright and gifted students who attended their school, but the students who needed remediation required teaching skills not yet cultivated in these teachers. For these teachers, to develop new skills will require clear and consistent policy and support from the school administration.

Low Income Schools. Another comparison can be drawn between two schools (Z and Q) with large populations of minority students from low income families. The ratio of students to teachers was similar, the turnover rate was the same, and teachers' age and years of experience for both schools were similar. The great differences were in the school policies and principal leadership styles. In school Z, the principal ranked very high on being collaborative in making policy, providing clear, consistent and well-communicated rules. The teachers also found this principal to be respectful and supportive. They met each month in small groups of teachers with the principal. Not surprisingly, the teachers' morale was very high.

By contrast, the principal in school Q was rated the highest on being directive and the lowest on being collaborative. School Q also ranked lowest of all schools for having clear and consistent school policies. The teachers only met with department heads as needed. Teachers' morale was the lowest of all schools. But, the teachers in school Q did rate this principal as being moderately supportive.

When students in the two schools were compared, the students in school Z rated the school high on school justice, were absent less often, and, on the average, were achieving at the expected percentile in all subjects but reading. Students in school Q were, on the average, below the expected percentile in all subjects except spelling. The students in school Q were observed to have about six times as much misbehavior in the classroom as did students in school Z. Nevertheless, students in both schools found the classrooms to be friendly, had more school spirit, commitment, and enthusiasm than did students in the other six schools of the study.

There were also differences between the two schools in how the Effective Use of Time program was implemented. Teachers in school Z started the training program implementing 28% of the effective practices. By winter, they were implementing 78% of them. This level of implementation continued on into the spring. The teachers evidenced a great deal of change and implemented the program well. Three of the six teachers in school Q were special education teachers. They started the program with excellent time management skills. Their very high scores raised the school implementation score to 67%. This high score masked the fact that two teachers had low scores. The school average implementation only changed by 7% from fall to winter. However, several teachers made dramatic changes in providing more interactive instruction and being more supportive of students. The off-task behavior in one teacher's classroom dropped from 16.6 in the fall to 6.1 in the winter. At the same time, this teacher increased questions and supportive feedback and reduced the non-interactive time.

Teachers at school Q started the program with very low morale. However, the principal was supportive of the program and provided release time for the teachers to attend training sessions. The teachers became more willing to try to make some changes in their allocation of time to activities. This group of teachers was provided an opportunity to see the desired behavior modeled by teachers in another school and received some personalized coaching from the trainer. This additional training and support may explain in part the continued growth of implementation into the spring (87%). By spring, the teachers' morale was higher and they rated the principal as being less directive and more collaborative. It must be noted that this was a new principal and most likely this person felt a need to be directive initially until a more collaborative policy could be developed.

Research Problems and Lessons Learned

Obtaining and keeping an adequate sample of teachers is one of the greatest problems in conducting research in secondary schools. We started with eight schools, expecting six teachers in each school. When the sessions actually started, there were seven teachers in some schools and only four in others. Fortunately, we accepted all the teacher we could get. This was 45 in the fall. By spring, the sample was reduced to 33. This attrition was due to illness, transfers and pregnancies. The lesson to be learned here is to over-recruit teachers in field research.

Another problem was losing one of our eight principals during the school year. One principal was replaced in

December and this posed a problem for an eight-school study of principal leadership style and policies. This problem became an advantage since it provided the opportunity to study the impact of this new principal whose policies and style were quite different from his predecessor.

Problem: two of our eight schools were selected for closing in Fall of 1981. The impact of this news upon teachers and students was enormous. It appears in the spring data as higher student absence rates, more off-task behavior, high school jeopardy ratings, more student commitment and school loyalty. Solution: Because these schools' closings affected the student and teacher spring data, the analyses have been conducted using the fall and winter data. Analyses using fall to spring change scores in teacher and student attitudes were no longer reasonable to conduct. Instead, we established criteria for implementing the Effective Use of Time Training program and measured each teacher's winter observed behavior using the established criteria as a yardstick.

Problem: some of the observations gathered in the fall were processed incorrectly and could not be recovered. The solution: we salvaged the data that could be safely analyzed and computed the percent of the available variables that were implemented for fall, winter and spring. We then could estimate the difference in the percent of variables that were implemented at different time of the year.

Cautions to the Reader

The findings from this study are primarily correlational and thus, must be viewed as a source for generating hypotheses. The sample of eight schools was small and caution must be exercised when generalizing to other populations. Nevertheless, it is interesting to note that the school policy variables and principal leadership styles that were found to be related to more positive and productive outcomes among teachers and students were the same in affluent, predominantly white schools as they were for less affluent, multi-cultural schools.

Our sample of teachers and students in each school was small. In most schools, our students were low-achieving. The high-achieving students in all schools tended to report more positive feelings and experiences in their schools. However, this study was aimed at identifying school policies and leadership styles that would aid teachers in providing effective use of class time with low-achieving students. The study has identified such features in the school studied.

The teachers, except for the four special education teachers, taught both high and low achieving classes of students. Thus, teacher attitudes and principal ratings were based upon their total school experience rather than just the low-achieving students of our sample.

What Next?

These findings are meant to serve as a basis for providing training for school administrators. The findings that principals will have more positive outcomes for teachers and students if they are collaborative and clear and consistent in their school policies may be true. The hard part is learning how to develop that kind of policy. All principals in this study were being creative in solving some of their many problems. Some solutions were effective in some situations, some were effective in other situations. It seems important that, along with learning about these findings, principals have the opportunity to share good ideas in a setting where they can learn from each other.

In conclusion, the problems of today's schools are quite apparent to the public, but, the solutions are more elusive. This study has attempted to identify relationships between school policies, teacher behavior, and student behavior that can guide us toward a better integration and use of all the human and physical resources available. The time and dollars spent in schools must be used effectively if all of our children are to reap the benefits of an appropriate education.

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Appendix A

PRINCIPALS' LETTER

Appendix A

PRINCIPALS' LETTER

Mr. Basil Huffman, Principal
San Jose High School
275 Nth 24th
San Jose, CA 95116

Dear Mr. Huffman:

I am writing you in regard to a study we will be conducting in school year 1980-81. The study is funded by National Institute of Education and will be conducted in eight Bay Area high schools. An abstract of the study is included here.

Margaret Needels or I will be calling you during the first week of June to see if you will be interested in taking part in the study. The requirements of the school would be to provide six teachers who teach either reading in the content area or in a remedial reading class. The school would need to provide the incentives for the teachers to attend seven workshops. In the past, incentives have taken the form of release time, inservice credit, or a stipend. In one class of each participating teacher, we will conduct objective low-inference observations in the fall, winter and spring. A school questionnaire will be given to students of the selected class and the teachers. For their participation in the study, the six teachers will receive seven workshops based upon their classroom observations. This training procedure is described in the paper included here, titled, "Submission to the Joint Dissemination Review Panel." Our training program has been given exemplar status by the federal government. The 100 teachers who have taken part have been enthusiastic in their praise for this inservice training.

In Phase II, if we identify school policies that are related to teacher change and behavior, we will provide a series of workshops to share the findings with the school administrators in the eight schools selected for study. Questions you may have regarding this program will be answered when we call during the week of June 6.

We are sorry to contact you so late in the school year but the funding for the project was just completed.

Respectfully yours,

Jane A. Stallings, Ph.D.
President

JAS:wf

Appendix B

ITEMS IN SCHOOL POLICY, PRINCIPAL LEADERSHIP AND STUDENT SUBSCALES

NOTE: Items preceded by an asterisk (*): When computing scale, magnitude of item is reversed from positive to negative.

Ratings were made on a scale of 1 to 4 or 1 to 5: from "Rarely occurs" to "Very frequently occurs".

Appendix B

ITEMS IN SCHOOL POLICY AND LEADERSHIP SUBSCALES

Rule Governed Organization

School and classroom rules are decided collaboratively among students, teachers, and administrators.

Students are tested on school rules and the consequences for disobeying them.

School rules and the consequences for disobeying them are publicized widely.

School rules are re-assessed.

Special arrangements are made to orient transfer students to school rules.

Provisions exist to encourage consistent enforcement of school rules and the fair application of justice.

Hindrance

* Instructions for the operation of teaching aids are available.

* Extra books are available for classroom use.

* Sufficient time is given to prepare administrative reports.

Administrative paperwork is burdensome at this school.

* School supplies are readily available for use in classwork.

Student progress reports require too much work.

Teachers have too many committee requirements.

* Custodial service is available when needed.

Routine duties interfere with the job of teaching.

* School secretarial service is available to teachers' use.

Supportive Leadership

The principal goes out of his way to help teachers.

The principal helps teachers solve personal problems.

The principal sets an example by working hard himself.

The principal does personal favors for teachers.

The principal uses constructive criticism.

The principal stays after school to help teachers finish their work.

The principal is well prepared when he speaks at school functions.

The principal helps staff members settle minor differences.

The principal explains his reasons for criticism to teachers.

The principal tries hard to get better salaries for teachers.

The principal looks out for the personal welfare of teachers.

The principal is in the building before teachers arrive.

The principal tells teachers of new ideas he has run across.

The principal is easy to understand.

Respectful Leadership

The principal would assume you had a good reason if you failed to appear for an assigned duty, such as hall duty, cafeteria duty, or some other assigned activity.

If you did not enforce building discipline regulations, the principal would assume you had a good reason and ask you for it.

He would assume you had a valid reason and ask you for it if you did not complete a particular form (report cards, attendance reports, etc.) within the designated time.

The principal would assume you had a good reason if you did not attend a scheduled teachers meeting.

If you failed to follow the proper procedures during a fire drill, he would believe you had a good reason and ask for it.

If you failed to follow the proper procedures before, during, and after a field trip, he would assume you had a good reason for doing so.

Directive Leadership

The principal makes all class scheduling decisions.

The principal schedules the work for the teachers.

* Teachers help select which courses will be taught.

The principal corrects teachers' mistakes.

The rules set by the principal are never questioned.

The principal runs the faculty meeting like a business conference.

Faculty meetings are organized according to a tight agenda.

Faculty meetings are mainly principal report meetings.

* Teachers are informed of the results of a supervisor's visit.

Teacher Esprit/Morale

Teachers spend time after school with students who have individual problems.

In faculty meetings, there is the feeling of "let's get things done."

Most of the teachers here accept the faults of their colleagues.

There is considerable laughter when teachers gather informally.

Teachers at this school show much school spirit.

The teachers accomplish their work with great vim, vigor, and pleasure.

The morale of the teachers is high.

Teacher Intimacy

Teachers' closest friends are other faculty members at this school.

Teachers invite other faculty members to visit them at home.

Teachers know the family background of other faculty members.

Teachers talk about their personal life to other faculty members.

Teachers have fun socializing together during school time.

* Teachers prepare administrative reports by themselves.

Teachers socialize together in small select groups.

Teachers work together preparing administrative reports.

Teacher Disengagement

The mannerisms of teachers at this school are annoying.

There is a minority group of teachers who always oppose the majority.

Teachers exert group pressure on non-conforming faculty members.

Teachers seek special favors from the principal.

Teachers interrupt other faculty members who are talking in staff meetings.

Teachers ask nonsensical questions in faculty meetings.

Teachers ramble when they talk in faculty meetings.

Teachers at this school stay by themselves.

Teachers eat lunch by themselves in their own classrooms.

Teachers leave the grounds during the school day.

Teachers talk about leaving the school system.

Responsibility for Failure

When your class is having trouble understanding something you have taught, is it usually because you did not explain it very clearly, or because your students are just slow in understanding difficult concepts?

When a student in your class can't remember something you said just moments before, is it usually because you didn't stress the point strongly enough, or because some students just don't pay attention?

If your chairman or principal suggests you change some of your class procedures, is it more likely because of his/her personal ideas about teaching methodology, or because your students haven't been doing well?

When a large percent of the students in your class are doing poorly, does it usually happen because they have done poorly before and don't really try, or because you haven't had the time to give them all the help they need?

When students in your class forget something that you explained before, is it usually because most students forget new concepts quickly, or because you didn't get them actively involved in the learning?

When you find it hard to get a lesson across to particular students, is it because you haven't insisted on their learning earlier lessons, or because they are just slow in understanding and learning?

When your students do poorly on a test, is it because they didn't really expect to do well, or because you didn't insist they prepare adequately?

If a child doesn't do well in your class, would it probably be because he did not work very hard, or because you didn't provide the proper motivation for him?

Suppose you don't have as much success as usual with a particular class. Would this probably happen because you didn't plan as carefully as usual, or because these students just had less ability than others?

Suppose you are trying to help a student solve a particular problem but she is having great difficulty with it. Would that heppen because you may not be explaining it at her level, or because she is not used to being helped by adults?

When you are having a hard time getting your students interested in a lesson, is it usually because you didn't have time to plan the presentation well, or because your students are generally hard to motivate?

If one of your students says, "You're a rotten teacher!" is it probably because many of your students have learning problems, or because you haven't been able to give that student enough individual attention?

When your students seem to have difficulty learning something, is it usually because they are not willing to really work at it, or because you weren't able to make it interesting for them?

If a parent is critical of you as a teacher, is it likely to be because you have difficulty getting that parent's child to do the work you require, or because that parent's child is developmentally not ready to do well in your class?

On those days when you are depressed about teaching, is it because learning is a difficult activity for many of your students, or because you just weren't able to motivate students to work as hard as they should?

STUDENT QUESTIONNAIRE SUBSCALES

Teacher Commitment

The teacher is usually well prepared for class.

* The teacher is rarely or seldom well prepared for class.

This teacher tries very hard to see that everybody learns.

This teacher really tries hard to do a good job.

* This teacher really doesn't care whether we learn or not.

This teacher cares a lot about what students think.

This teacher goes out of the way to help students.

Teacher Rule Clarity and Enforcement

There is a clear set of rules for students to follow.

* There are very few rules to follow.

If a student breaks a rule in class, he's sure to get in trouble.

The teacher explains what will happen if a student breaks a rule.

* The teacher is not very strict.

The teacher explains what the rules are.

Students can get in trouble with the teacher for talking when they're not supposed to.

On-Task Behavior

Students put a lot of energy into what they do here.

Almost all class time is spent on the lesson for the day.

This is a well-organized class.

* Students daydream a lot in this class.

Students are expected to stick to classwork in this class.

Students are almost always quiet in this class.

* Students are often "clockwatching" in this class.

- * We often spend more time discussing outside student activities than class-related material.
- * Students fool around a lot in this class.
- Most students in this class really pay attention to what the teacher is saying.
- Getting a certain amount of classwork done is very important in this class.
- * This class is often in an uproar.
- * Some students fool around a lot in this class.
- * Sometimes it is hard to work in this class because its noisy.
- * Sometimes this class is kind of mixed up and confused.
- Students are pretty quiet in this class.
- * Most students don't work very hard in this class.

Class Friendliness

- Students in this class get to know each other very well.
- * This teacher spends very little time just talking with students.
- * Students in this class aren't very interested in getting to know other students.
- The teacher takes personal interest in the students.
- A lot of friendships have been made in this class.
- The teacher is more like a friend than an authority.
- It's easy to get a group together for a project.
- The teacher goes out of his way to help students.
- I think the teacher really likes the students in this class.
- * It is hard to make friends in this school.
- Most students in this class like each other.
- * Most students don't like this class.
- This teacher cares a lot about what students think.
- * Students in this class are not friendly.
- This teacher is more like a friend than someone who tells you what you should do.
- Students in this class like each other as friends.
- Most students seem to like this class.

Students in this class like their teacher a lot.

Enthusiasm for School

I really enjoy my work in this school.

I often get so interested in school work I don't want to stop.

* Most of my school work is boring.

I am proud of my school work.

Commitment to School

How willing would you be to work on a carwash held on a school holiday? The money you earned would be used to buy new equipment for your school.

How willing would you be to help sell refreshments during evening school events? The money you earned would be used to buy new equipment for your school.

How willing would you be to serve as a guide on parents' night? You would help parents find the teachers with whom parents wanted to talk.

How willing would you be to work on a student commitee that was formed to decorate the school cafeteria? The committee would do its planning and decorating on Saturdays.

How willing would you be to take part in a program for new students to be held next fall during the five days before school starts? Your job would be to tell new students about school activities and to show them around the school.

How willing would you be to be one of your school's representatives at a conference of all the schools in your area? At the conference you and the representatives from the other schools would discuss ways of improving your schools. The conference would meet Friday evening and all day Saturday.

School Justice

When teachers become angry in this school, it is usually for a good reason.

* Teachers around here almost never notice when a student does a good job.

* When I work hard around this school, nobody seems to appreciate it.

* I know some students in this school who got into trouble when they had done nothing to deserve it.

Attractiveness of School

* This school is no better than any other school.

I feel it is an honor to go to a school like this.

Most of the time I think this is one of the best schools there is.

Sometimes this school feels just like a big family.

* I often wish I could be in some other school.

Appendix C

DEFINITIONS OF OBSERVATION VARIABLES

Appendix C

DEFINITIONS OF OBSERVATION VARIABLES

Chapter II contains a description of the Observation Instruments used in this study. The SOI Manual is available from the Stallings Teaching and Learning Institute.

Use of Time Variables (from Snapshot, described in Appendix C)

Over the three days, how was the teacher's and student's time distributed?

1. Student time spent in interactive instruction:
    - Reading aloud
    - Instruction
    - Discussion
    - Practice/Drill
2. Student time spent in non-interactive instruction:
    - Silent reading
    - Written assignments
3. Teachers giving assignments and organizing:
    - Making assignments
    - Classroom management
4. Teachers working alone:
    - Management tasks without students
5. Students off-task:
    - Social interaction
    - Uninvolved
    - Being disciplined

Interaction Variables (from Five-Minute Interaction)

Each FMI variable is defined by a specified set of frames said to be acceptable. The value of an FMI variable is the number of acceptable frames that were observed averaged over three days. The variable specifications that follow list each FMI variable along with a description of the codes required for the frame to be accepted. The definitions of the codes follow in this Appendix.

VARIABLE	WHO	TO WHOM	WHAT	HOW
6. Teachers speak to one student	T	F,M	-*	-
7. Teachers speak to small group	T	S	-	-

VARIABLE	WHO	TO WHOM	WHAT	HOW
8. Teachers speak to everyone	T	E	-	-
9. Teachers speak to different students	T	F	-	-
10. Students read aloud	F,M	T,A,S,L,E	4	R/M
11. Teachers ask questions	T	F,M,S,L,E	1Q	R/M,T
12. Students respond	M,S,L,E	T	3	R/M,T
13. Teachers praise or support	T	F,M,S,L,E	7	-
14. Teachers correct students	T	F,M,S,L,E	9	R/M,T
15. Teachers guide and correct	T	F,M,S,L,E	9	R/M&G
16. Teachers instruct	T	F,M,S,L,E	4	R/M,T
17. All reading and task statements	-	-	-	R/M,T
18. All assignment statments	-	-	-	0
19. All social statements	-	-	5	-
20. All behavior statements	-	-	-	B
21. All teachers working alone	T	T	6	0
22. All positive interactions	-	-	-	P**
23. All negative interactions	-	-	-	N**
24. Intrusions	-	-	-	I**

* all codes are acceptable.
**all other HOW codes are acceptable.

SECONDARY OBSERVATION INSTRUMENT
(Teacher-Focus)

OVERVIEW

The teacher-focus Secondary Observation Instrument (SOI) provides a record of activities that occur in the classroom and the interactions between teachers and students, focusing on the teacher and those persons with whom he or she is interacting. The instrument was designed to be sensitive to different instructional methods, interpersonal interactions, and classroom environments. For the purpose of this study, the lead teacher in the classroom will be regarded as the focus person.

The observation instrument assesses the educational processes, which include teacher behaviors, interactions between teachers and students, and the groupings of teachers and students that occur during classroom activities.

The observation instrument contains three sections: Identification and Classroom Information, Classroom Snapshot, and Five-Minute Interactions. Classroom information is recorded in all of these sections, and each section will be described in detail in Section II of this manual, "Explanation of Coding Procedures."

The first section, Identification and Classroom Information, provides identification information necessary for data processing and analysis, and records the number of adults and students regularly in the classroom and the duration of the class.

The second section is the Classroom Snapshot. The Snapshot is a form that yields data about the nature of the activities of each adult and student in the classroom, the size of the groupings, and the materials being used. From this section, information is obtained on how the teacher spends his or her time and with whom, how the aides spend their time and with whom, how often the students operate independently, and the activities that occur. Materials used are also recorded.

The third section is the Five-Minute Interaction (FMI). The Five-Minute Interaction can be used to observe teachers in group interactions or working alone. It consists of a series of frames in which each behavior/interaction is recorded in the four categories provided: who, to whom, what, and how. Several frames that follow each other record the entire interaction, or, for single individuals, describe the observable interaction.

At the beginning of each observation booklet there is one set of each of the Identification and Classroom Information section. Subsequent pages contain five sets of the Classroom Snapshot and Five-Minute Interaction frames. The Identification and Classroom Information section is coded only once during the class period; the Classroom Snapshot and the FMI are coded five times per class period.

Classroom Snapshot

The Classroom Snapshot is so named because it records the environment and the participants in the classroom as if they were being photographed at one instant. It records every person in the classroom in the activity in which they are engaged and shows with whom they are engaged. The Classroom Snapshot is coded just before the coding of the Five-Minute Interaction. The distribution of adults and students among the activities which are occurring simultaneously are recorded as the observer placed them on the grid going clockwise around the room. Essentially, the Snapshot provides data to assess the activities occurring, the materials being used, grouping patterns, teacher and adult participation, and students in activites independent of adults.

As shown on the following page, the Snapshot, the classroom activities are listed down the left side of the page, and the materials are listed across the top. The observer records the information in each appropriate circle, recording each unique grouping occurring in the classroom. A completed Snapshot documents the number and kind of groupings, the activity and materials of each group, and whether an adult is present.

The observer scans the classroom and forms a "snapshot" picture of the activities and materials. It may take 1 or 2 minutes to record this picture into the snapshot instrument.

The letters at the beginning of each row indicate the placement of each category of participants in the classroom:

T = Teacher
A = Aide
O = Other Adult
i = Independent Student -- working without an adult present

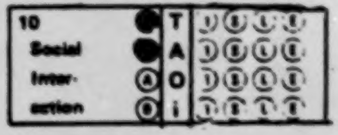
If it is a team teaching arrangement, show each teacher in the activity with the student or students with whom they are working when the Snapshot is recorded.

The 1, S, L and E in the rows relate to the number of students who are in the group that is being recorded.

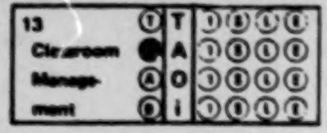
1 = One Student
S = 2-10 Students
L = 11 to one less than the total group
E = Everyone.

Similarly, place each aide or other adult on the grid in the appropriate activity and with the appropriate group of students. When students are working or socializing and adults are not present, they are recorded on the i line of the activity row.

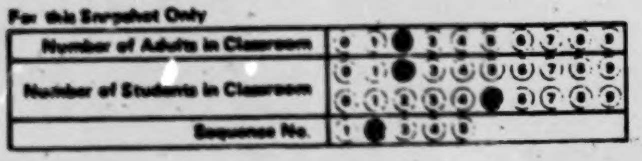
On some occasions, adults are not interacting with students. These adults can be placed in Activity 10 and Activity 13 in the box to the left of the columns (see below). If the T and A are marked in line 10 as shown, we can assume the teacher and the aide are having a social conversation:


10
Social
Inter-
action
T
A
O
i

If an aide is grading papers or cleaning up the room and is not involved with students, the code would be marked as shown below:


13
Classroom
Manage-
ment
T
A
O
i

At the bottom of the page is a summary of the number of adults and students in the classroom. The sequence of the observation is also marked here. The example shown below indicates that 2 adults and 25 students are present and that it is the second observation in the period.


For this Snapshot Only
Number of Adults in Classroom
Number of Students in Classroom
Sequence No.

CLASSROOM SNAPSHOT

MATERIAL → ACTIVITY ↓		01 Textbook	02 Workbook Worksheet	03 Test	04 Game/ Manipulative Material	05 Machine	06 Chalkboard	07 Non Curricular Reading	08 No Material
01 Reading Silently	T	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ
	A	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ
	O	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ
	i	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ
02 Reading Aloud	T	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ
	A	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ
	O	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ
	i	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ
03 Making Assignments	T	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ
	A	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ
	O	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ
	i	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ
04 Instruction/ Explanation	T	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ
	A	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ
	O	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ
	i	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ
05 Discussion/ Reviewing Assignments	T	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ
	A	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ
	O	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ
	i	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ
06 Practice Drill	T	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ
	A	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ
	O	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ
	i	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ
07 Written Assignments	T	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ
	A	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ
	O	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ
	i	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ
08 Taking Test Quiz	T	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ
	A	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ
	O	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ
	i	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ
09 Non-math or non-reading Instruction	T	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ
	A	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ
	O	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ
	i	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ
10 Social Inter- action	Ⓣ T	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ
	Ⓐ A	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ
	Ⓐ O	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ
	Ⓞ i	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ
11 Student Uninvolved	T	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ
	A	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ
	O	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ
	i	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ
12 Being Disciplined	T	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ
	A	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ
	O	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ
	i	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ
13 Classroom Manage- ment	Ⓣ T	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ
	Ⓐ A	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ
	Ⓐ O	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ
	Ⓞ i	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ	Ⓘ Ⓢ Ⓛ Ⓔ

For this Snapshot Only

Number of Adults in Classroom	⓪ ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨
Number of Students in Classroom	⓪ ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪ ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨
Sequence No.	① ② ③ ④ ⑤

120

2

INTERACTION CODES

Who/To Whom

Code	Description
T	Teacher
A	Adult/Aide
F	First Interation (Student)
M	Main Interaction (Student)
V	Visitor
S	Small Group (2-10)
L	Large Group (11-entire class minus one)
E	Everyone
O	Object

What

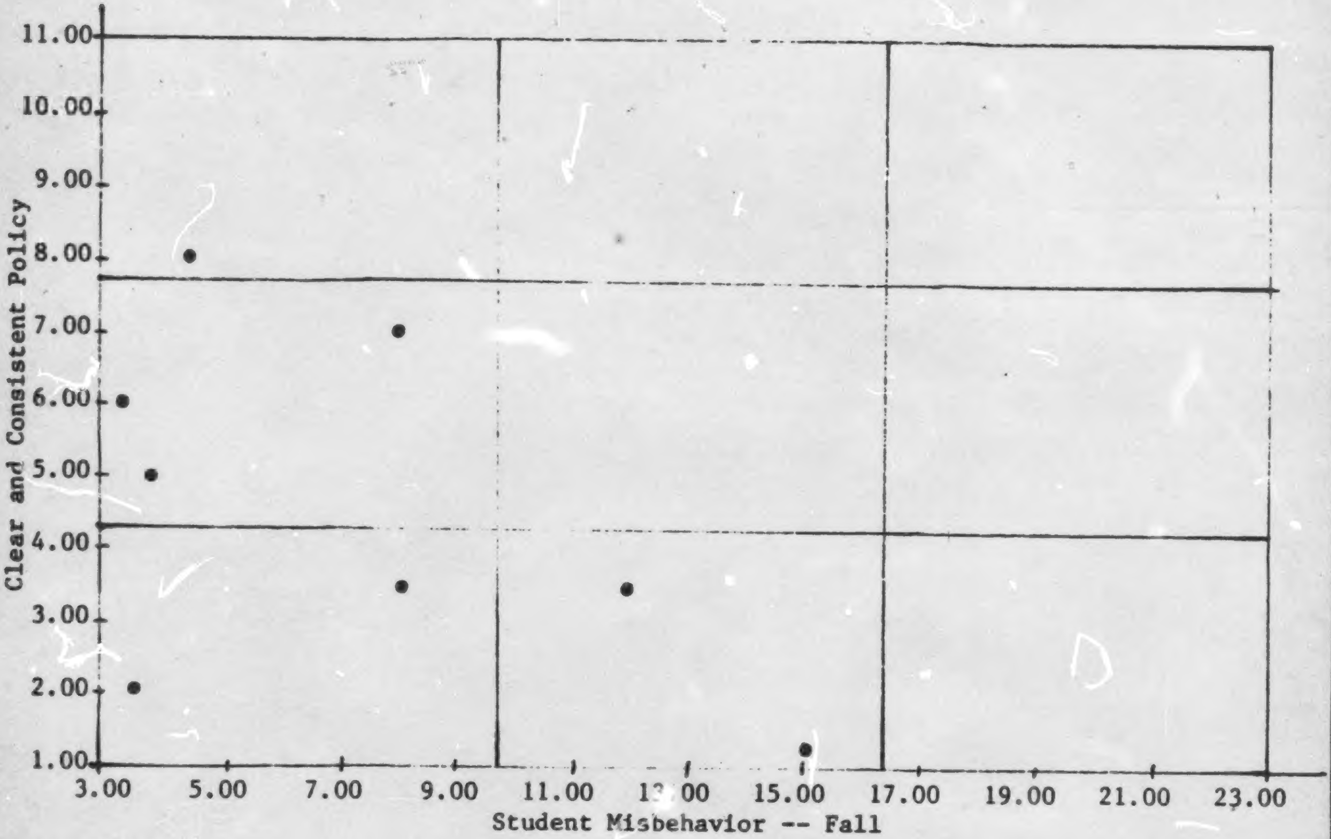
Code	Description
1	Command
1Q	Direct question
2	Evaluative question
2Q	Open-ended question
3	Response
4	Instruction
5	Social comment
6	Activity-related comment or action
7	Support/acknowledge/praise
9	Correction
10	No response/don't know
11	Refuse/rejects
12	Observing

How

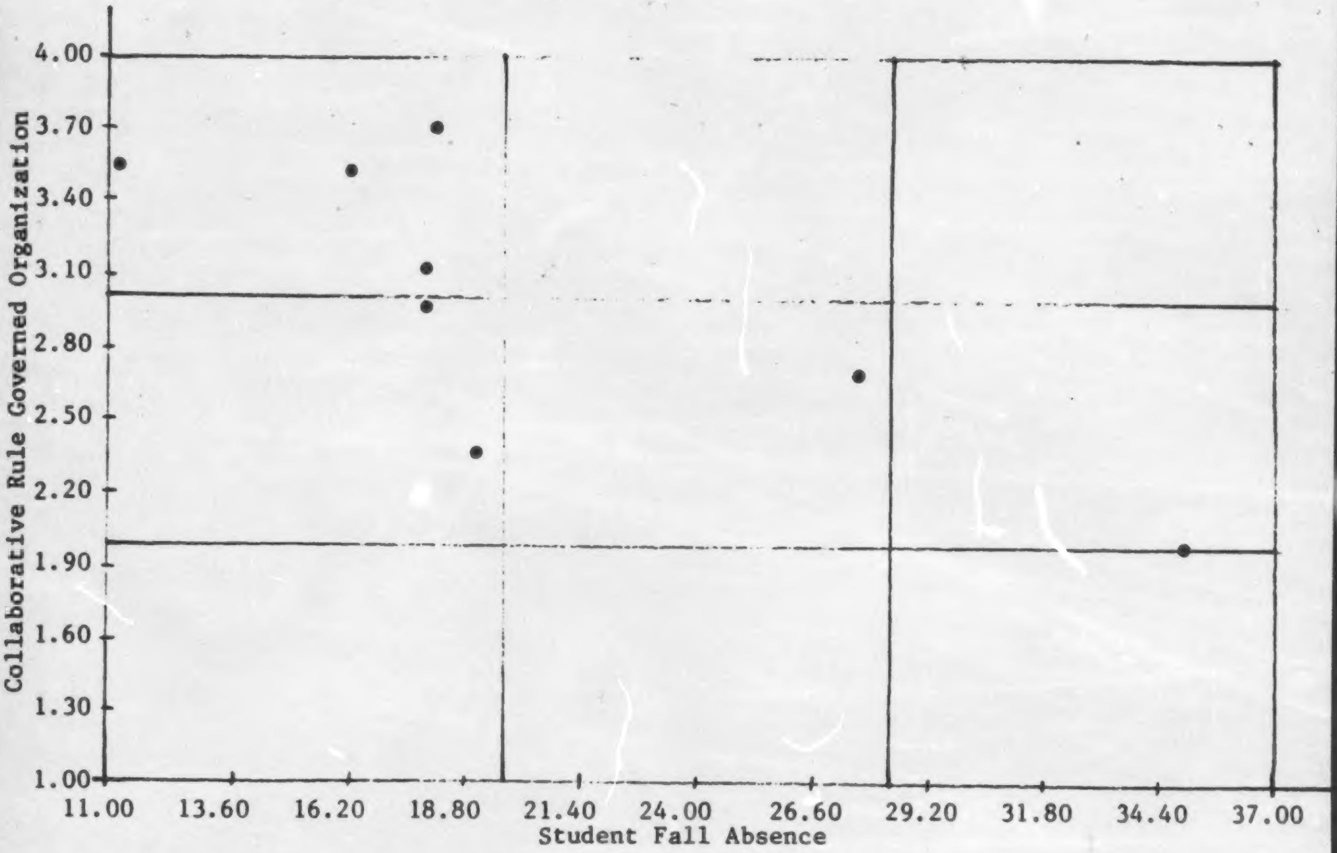
Code	Description
T	Task
R/M	Reading
B	Behavior
N	Negative
G	Guide
I	Intrusion
O	Organizing
P	Positive
T	Touch
L	Reading Aloud
W	Written Work

Appendix D

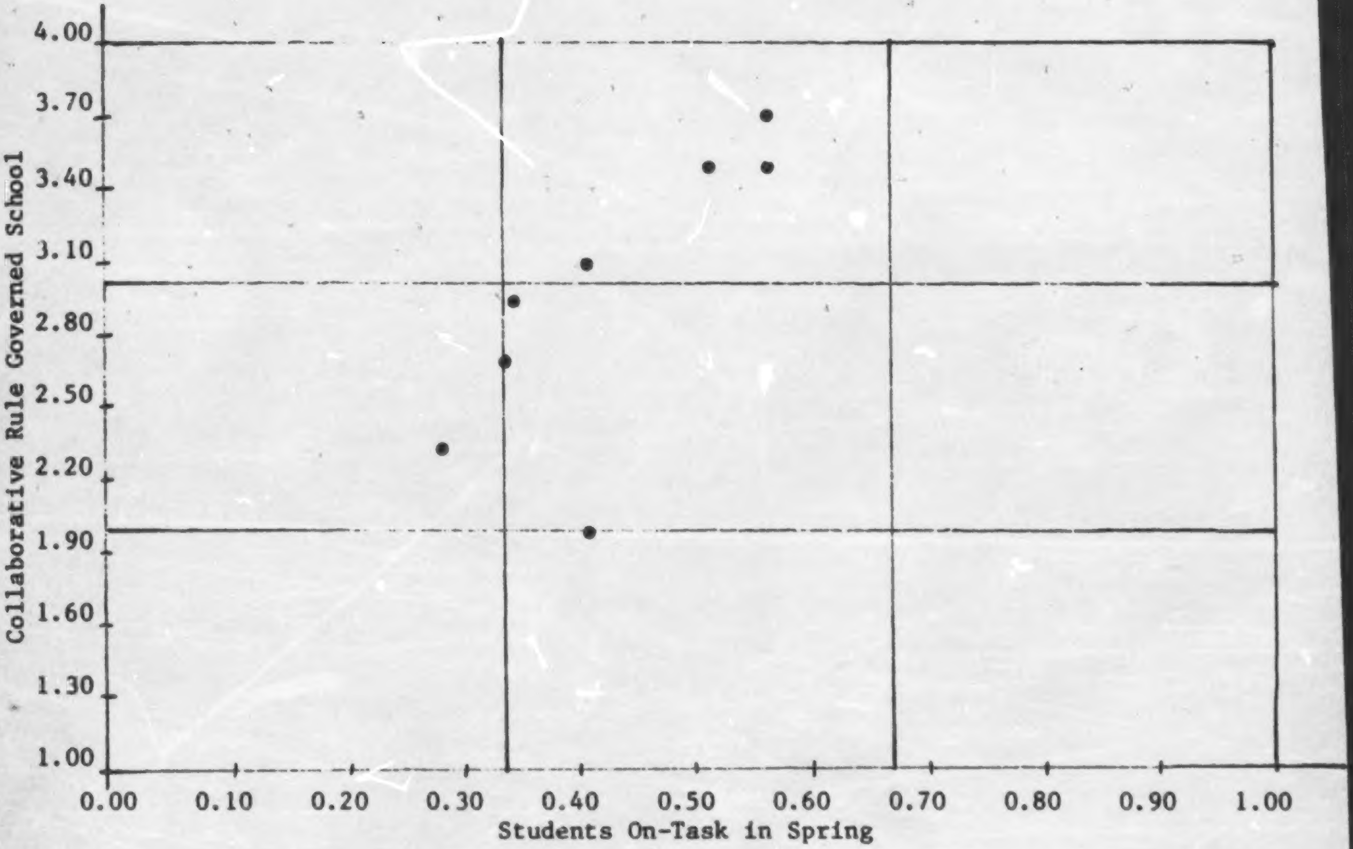
SCATTERPLOTS



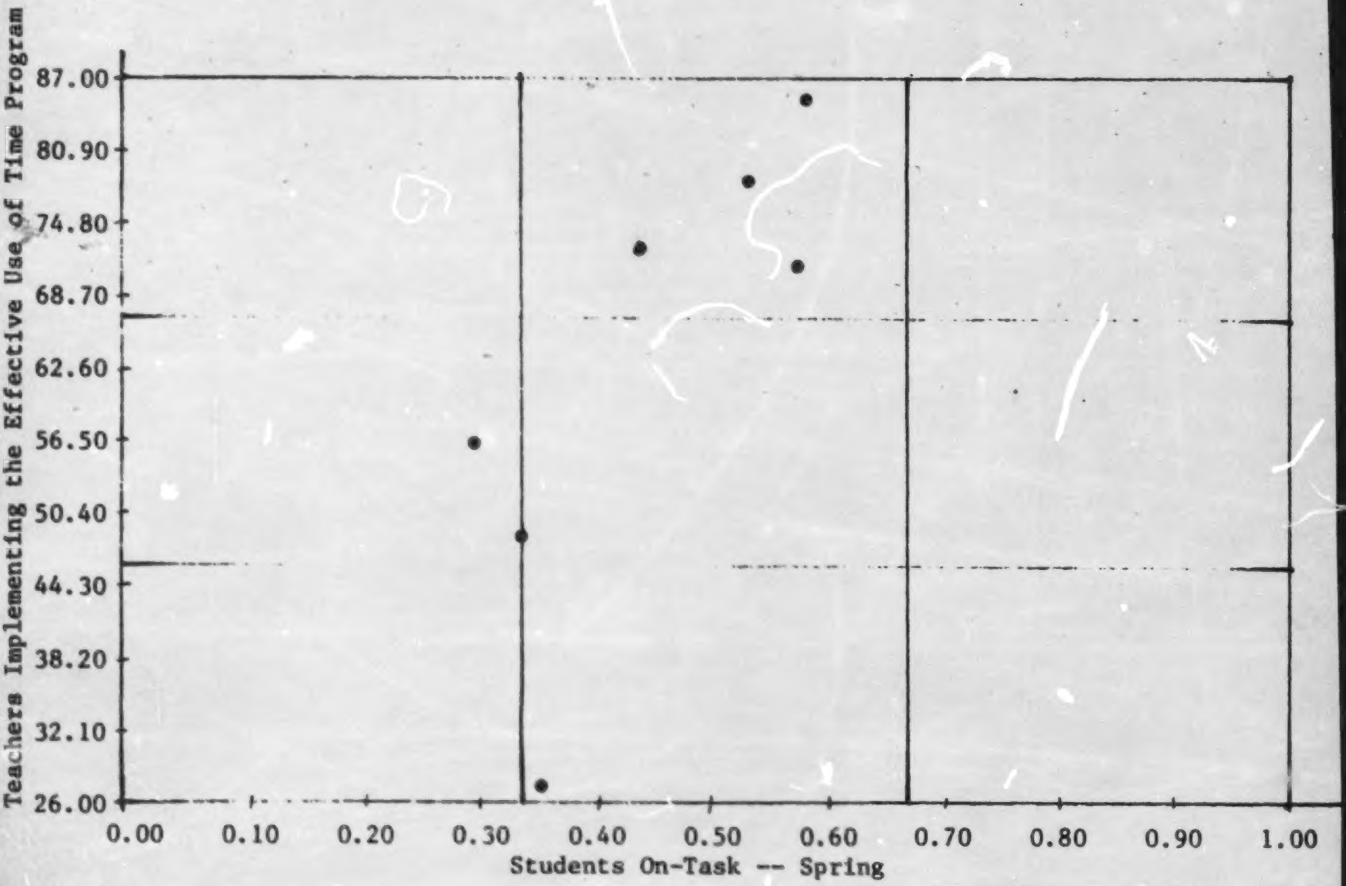
r = -.533
Student Misbehavior: $\overline{X}$ = 7.23; SD = 4.4
Clear and Consistent Policy: $\overline{X}$ = 4.5; SD = 2.4



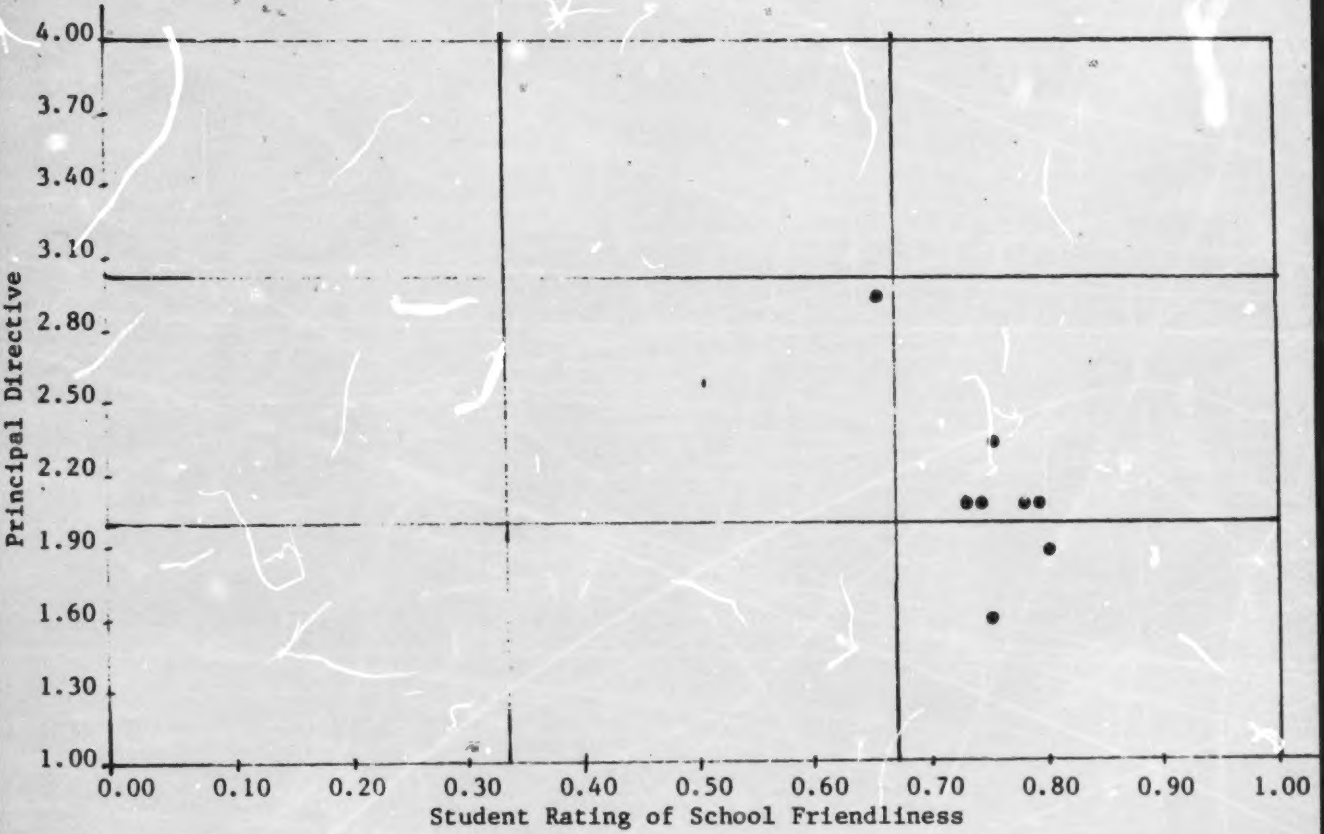
r = -.794
Student Absence: $\overline{X}$ = 20.25; SD = 7.4
Collaborative Rule Governed Organization: $\overline{X}$ = 3.0; SD = .59



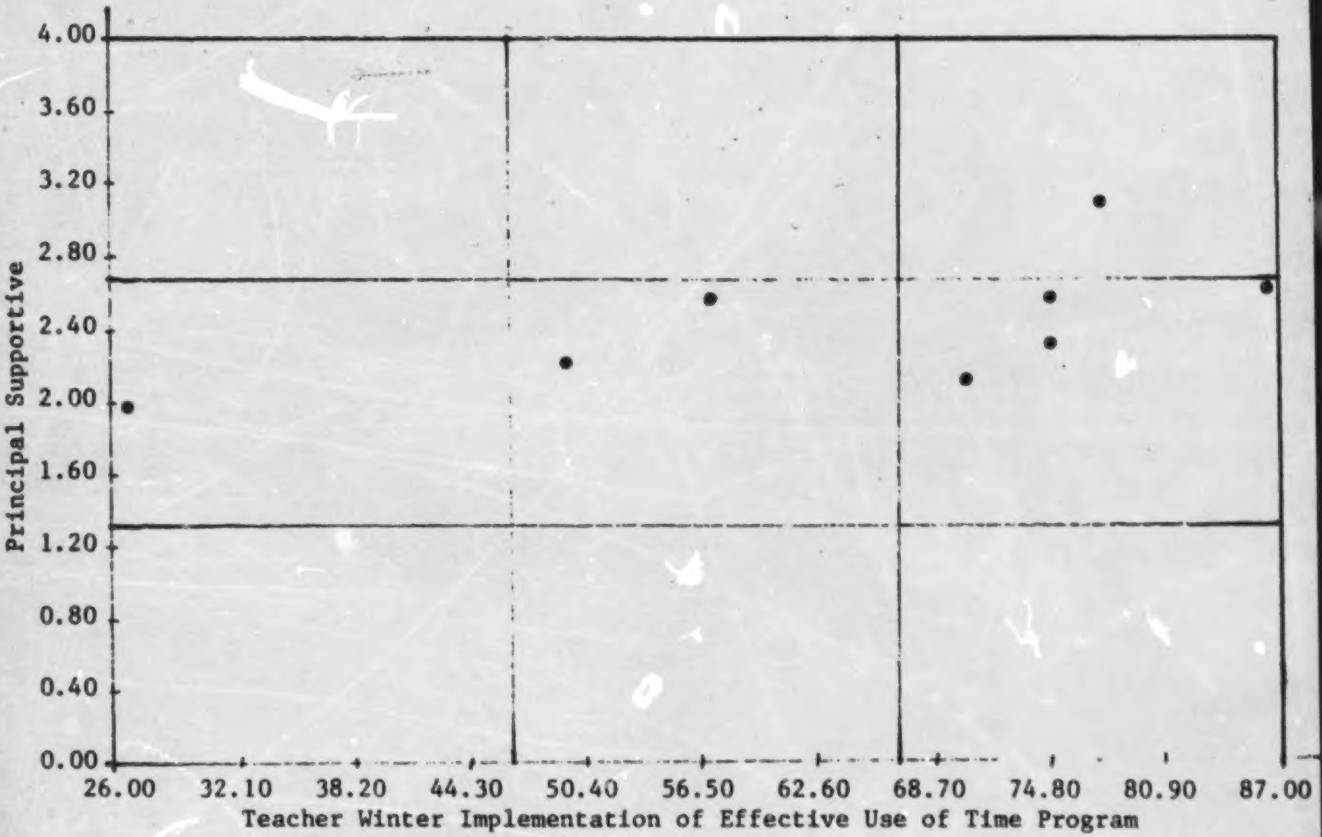
r = .768
Students On-Task: $\overline{X}$ = .44; SD = .11
Collaborative Rule Governed School: $\overline{X}$ = 3.0; SD = .59



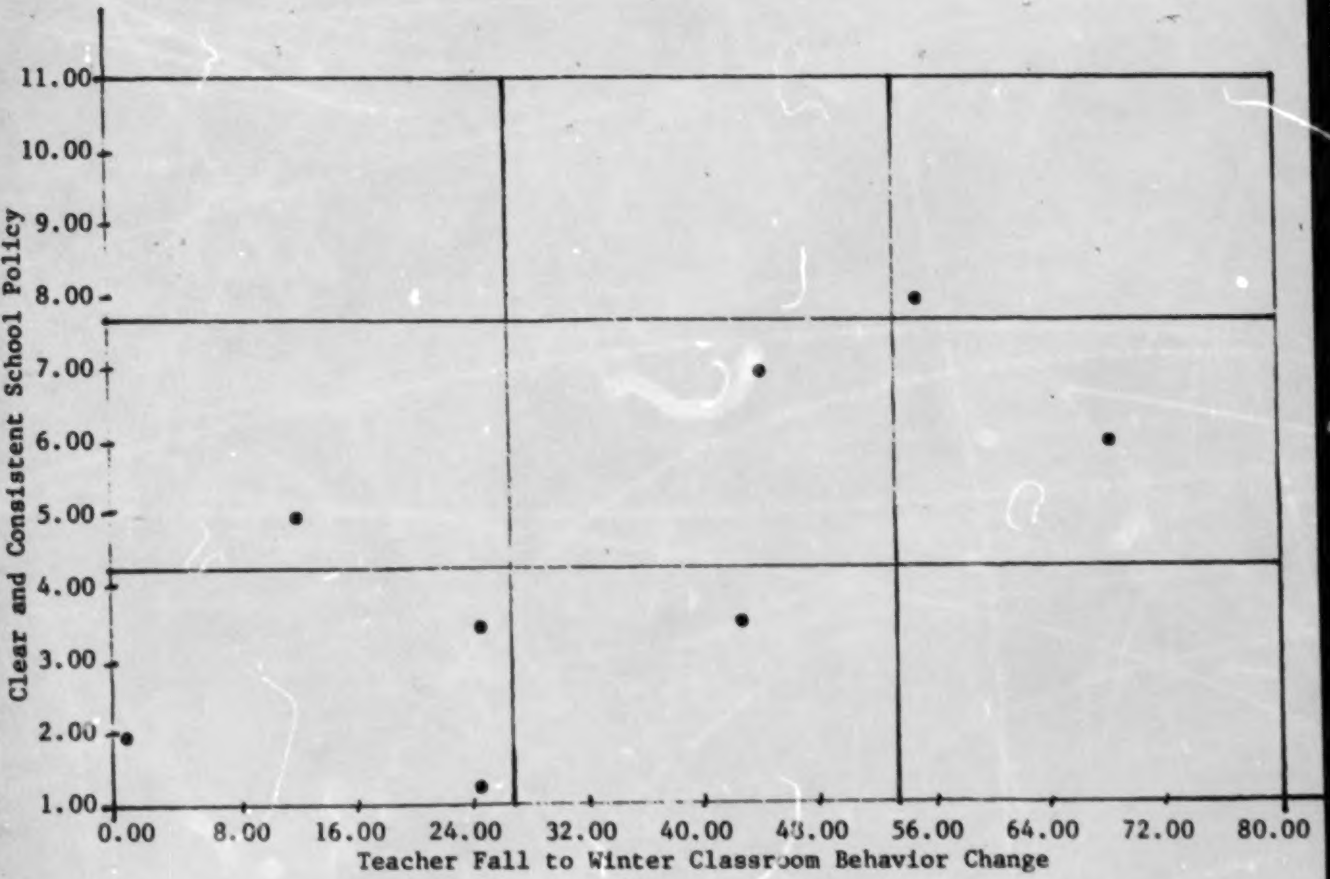
r = .711
Students On-Task: $\overline{X}$ = .44; SD = -.11
Teachers' Implementation: $\overline{X}$ = 64.4; SD = 19.6



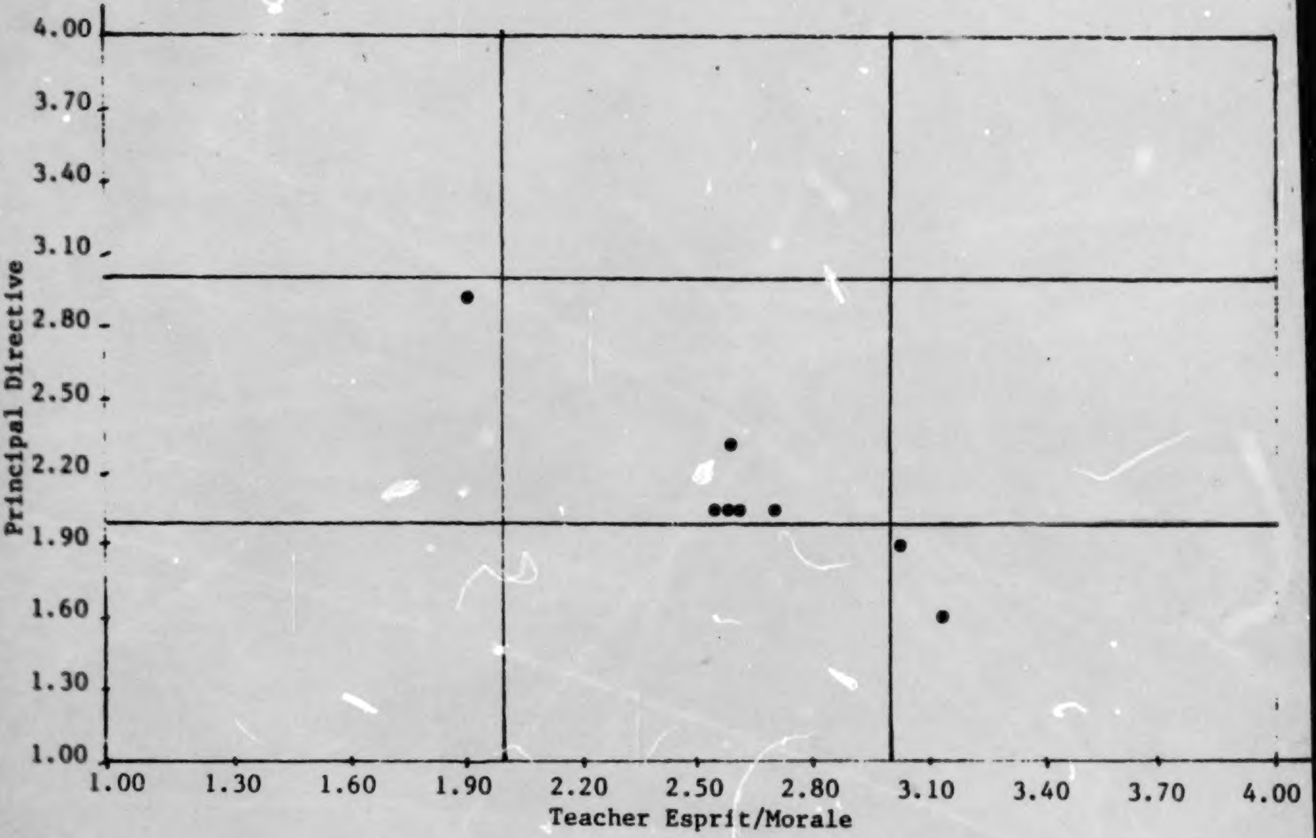
r = -.726
School Friendliness: $\overline{X}$ = .75; SD = .05
Principal Directive: $\overline{X}$ = 2.14; SD = .37



$\underline{r}$ = .595
Teachers' Implementation: $\bar{X}$ = 64.4; $\underline{SD}$ = 19.6
Principal Supportive: $\bar{X}$ = 2.4; $\underline{SD}$ = .33



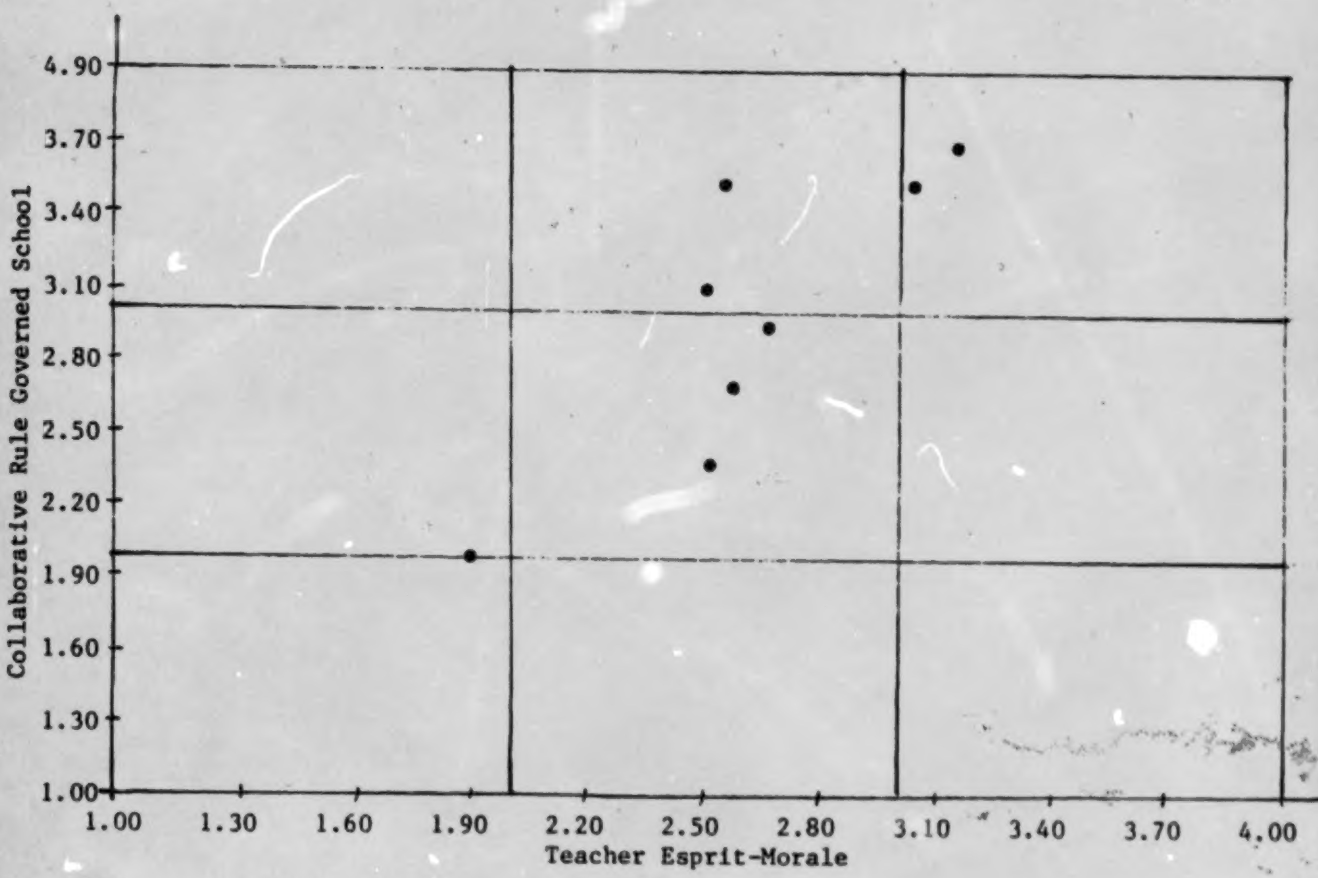
r = .660
Teacher Behavior Change: $\bar{X}$ = 33.8; SD = 22.7
Clear and Consistent Policy: $\bar{X}$ = 4.5; SD = 2.4



$\underline{r}$ = -.961

Teacher Esprit/Morale: $\overline{X}$ = 2.6; $\underline{SD}$ = .37

Principal Directive: $\overline{X}$ = 2.14; $\underline{SD}$ = .37



r = .831
Teacher Esprit-Morale: $\overline{X}$ = 2.6; SD = .37
Collaborative Rule Governed School: $\overline{X}$ = 3.0; SD = .59